

CORPORATION FOR NATIONAL SERVICE
NATIONAL SERVICE FELLOWSHIP PROGRAM



THE ENVIRONMENTAL SERVICE-LEARNING
RESEARCH PROJECT

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July 2000

CORPORATION FOR NATIONAL SERVICE

Created in 1993, the Corporation for National Service oversees three national service initiatives—AmeriCorps, which includes AmeriCorps*VISTA, AmeriCorps*National Civilian Community Corps, and hundreds of local and national nonprofits; Learn and Serve America, which provides models and assistance to help teachers integrate service and learning from kindergarten through college; and the National Service Senior Corps, which includes the Foster Grandparent Program, the Senior Companion Program, and the Retired and Senior Volunteer Program (RSVP).

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The National Service Fellowship Program, launched by the Corporation for National Service in 1997, involves a team of individual researchers who develop and promote models of quality service responsive to the needs of communities. The goal of the program is to strengthen national service through continuous learning, new models, strong networks, and professional growth.

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tion for nature, who passed on during the later part of this fellowship.

If the pseudonyms of the partnerships profiled in the research actually represent the names of real-life programs, the fault lies with the author and her lack of creativity.



THE ENVIRONMENTAL SERVICE-LEARNING PROJECT: ARE ENVIRONMENTAL EDUCATION AND SERVICE-LEARNING A NATURAL FIT?

THE RESEARCH

This National Service Fellowship research examined the emerging practice of environmental service-learning with youth, a field significantly enhanced through community partnerships with AmeriCorps and Learn and Serve America, in the national service network. More than 100 programs were surveyed, interviews were conducted with twenty program directors and service-learning coordinators, and site visits and field interviews included community partners, teachers, program directors, national service participants, and students—in two corps-based and two university-based— environmental service-learning partnerships.

THE FINDINGS

Five promising practices for environmental service-learning partnerships, as well as some strategies for sustaining these partnerships beyond national service funding are offered. A framework for program sustainability was developed for practitioners to use or adapt as a planning tool. Using this framework, four case studies appear as profiles to show where partnerships are in alignment with their purpose and community partners, and where they could create a balance with respect to the five promising practices.

WHAT IT MEANS TO YOU

Harold Ward (1999) called environmental studies and service-learning in higher education a natural fit. For youth and community to “fit” with service and environment, partnerships need to examine the benefits and challenges of working with schools—and understand the role of service-learning in school reform—or partner with community-based organizations to engage youth during out of school time. Finding the right “fit” is critical to program success and sustainability. To help guide practitioners, program officers, evaluators, and grant-makers toward more appropriate support for environmental service-learning, a sample planning framework and an annotated bibliography of environmental service-learning and related resources appear in the appendices.

FOR MORE INFORMATION

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EXECUTIVE SUMMARY

Expanded opportunities for service-learning, and to some degree environmental service, have been facilitated through the Corporation for National Service since 1994. The combined practice of these two disciplines is frequently referred to as environmental service-learning. There are at least two doors through which practitioners enter this field—agencies and community-based organizations—or, curriculum integration and school reform. Environmental education professionals have attempted to infuse environmental education into the core curriculum since the 1970s. Now service-learning is having a go at this same challenging but honorable goal, changing our nation's schools.

The initial inclination of the researcher was to look at schools and not community-based service learning. This, however, would have limited the sample size and excluded some very interesting partnerships. These social distinctions are not recognized separately in natural ecosystems. Rather, they are integrated into one watershed community. Therefore looking at the whole, rather than the parts, of environmental service-learning partnerships seemed like a more sound approach.

The Environmental Service-Learning Research Project was developed to provide some critical answers for three research questions: (1)What are the common characteristics of high-quality environmental service-learning partnerships?; (2)What promising practices can be identified for these partnerships?; and, (3)What challenges and barriers to sustaining high-quality environmental service-learning are experienced by partnerships in the national service network?

THE STUDY

From December 1999 through February 2000, more than 100 surveys were sent to programs partnering with AmeriCorps and Learn and Serve America, and a few program not currently receiving Corporation funding, identified through the national service network and national nonprofit organizations. Participants were selected from forty-one respondents; thirty-two program directors and service-learning coordinators in twenty states met the following criteria: (1) the program has been operational for at least one year; (2) the program uses service-learning as an educational strategy; and, (3) a minimum of 25 percent of the program's youth service activities take place in the local environment.

Follow-up telephone interviews with twenty of the thirty-two participants were conducted in February through April 2000. Those discussions focused on the value-added of service-learning to environmental topics, definitions of environment and service-learning, and the proposed promising practices. Then, four case stud-

ies—two corps-based and two university-based—environmental service-learning partnerships are profiled based on a partnership planning framework developed from the promising practices. The framework is a simple one page rubric that considers three stages of program development: starting, growing, and sustaining high-quality environmental service-learning partnerships. The case studies were based on site visits and interviews with students, teachers, community partners, and national service participants.

PROMISING PRACTICES

The suggested “promising practices” of environmental service-learning include: (1) encourages youth leadership and decision-making; (2) integrates and values the community voice; (3) fosters civic stewardship; (4) provides opportunities for cross-cultural connections; and, (5) plans for the long-term sustainability of the program.

STRATEGIES FOR PROGRAM SUSTAINABILITY

The following sustainability strategies were identified from the study: 1) integration with curricula and standards, or organizational mission; 2) increasing organizational capacity through staff development, paid positions, planning time, equipment and materials, and training and support; 3) developing a coordinated network of community resources and committed partners; 4) a broad-base of funding, including local sources, and self-supporting projects; 5) clarifying roles, responsibilities, and expectations among partners to develop a partnership that is equitable and in alignment with its purpose; and, (6) adequate planning time for community partnerships to develop proposals and longer funding cycles to support the development of true collaboration.

INTERPRETING THE FINDINGS

Environment service-learning has the potential to draw schools and youth service organizations into long-term partnerships. These programs enhance access to science learning and civic stewardship for youth through projects in their communities. Environmental projects engage non-traditional learners and at-risk students through hands-on activities. High-profile projects in the local environment or neighborhood draw the interest and participation of parents and families.

Environmental service-learning partnerships are less successful with providing all students leadership opportunities and developing cultural understanding as formal components of their programs. The most significant challenge for high-quality, environmental service-learning partnerships in the national service network is program sustainability.

FUTURE DIRECTIONS

More recognition of the role of community-based organizations in supporting and sustaining high-quality programs is called for. Community-based organizations are frequently excluded from receiving support through funding initiatives. Validation must be accompanied by access to funding for designing, building, and sustaining environmental service-learning partnerships.

More information on the impacts of engaging non-traditional learners and promoting cultural understanding through environmental service-learning is needed. Our environment would be well-served if research looked more closely at indigenous service-learning for guidance and inspiration. There is also a need to study how lower-income populations may benefit from the inclusion of social equity and environmental justice as aspects of environmental service-learning programming.

The Corporation must “boot-up” their support for environmental programs. Four specific recommendations for the Corporation, based on this research are: (1) organization and dissemination of a cross-stream database to support local and national networks; (2) develop field-friendly resources for national service participants; (3) building partnerships to support environmental service-learning with national organizations, agencies, and universities; and, (4) longer funding cycles for promising programs, and more time and support for community partnerships in developing well-designed programs in the proposal and renewal processes.

Youth are actively engaged in improving their environment and neighborhoods, with enthusiasm and hope. Why wait for the future to empower youth to make a difference?



INTRODUCTION

Many youths, and particularly middle school youth, identify the environment as the main focus of their concern (National Geographic Society, 1999). In 1994 youth service in the environment was given a boost, nationwide, through support from the Corporation for National Service (the Corporation). The Corporation has four target areas of emphasis: education; public safety; environment; and, other human needs. Many educational and youth service activities, both in the national service network and beyond, engage youth in environmental projects with intentional learning outcomes and thus address two priority areas of the Corporation—environment and education.

Service-learning, also known as community service-learning, is an educational strategy or pedagogy that links participants to needed service opportunities in the local community. This research will examine the interface between environmental education and service-learning to identify a compelling rationale for combining the two fields, frequently called environmental service-learning.

Internationally recognized in 1977 by the Environmental Education Intergovernmental Conference in Tbilisi, Georgia, environmental education has been integrated to some degree into the core curriculum, and is also taught as a separate subject, in U.S. schools. There are many programs that emphasize youth service in the environment during out-of-school-time sponsored by youth service organizations such as 4-H, Boys and Girls Clubs, and YMCA (Sagawa, 1998). Few studies have been conducted on the educational efficacy of environmental education (Hoddy, in Lieberman & Hoddy, 1999). In spite of environmental education's thirty-year legacy, we have yet to institutionalize or sustain environmental education in most schools and youth organizations (Simmons, 1995). In fact, the trend now is to look at the environment as an integrating context for learning which includes projects in the community (Lieberman & Hoddy, 1999).

Youth and environment are a good match. What happens in-between is a function of what resources are available and the relationships and history of partnering in individual communities. Organizational culture and mission are other factors to consider in how communities connect youth to the environment through service partnerships. The intent of this project is to identify many entry points for service-learning—to consider multiple settings and a myriad of partnerships—that link youth to community—through social and personal enrichment, and service to the local environment. Although this research is based on a broad definition for the term “environment” there are also clear indications that “service-learning” may have different interpretations according to the organizational setting of the program. For the most part, the language from the authorizing legislation will apply to

most programs considered in this study.

The Environmental Service-Learning Research Project attempts to answer three questions:

- 1) What are some of the common characteristics shared by environmental service-learning partnerships?
- 2) What promising practices can be identified for high-quality environmental service-learning partnerships?
- 3) What challenges and barriers to sustaining high-quality environmental service-learning are experienced by partnerships in the national service network?

Through examining the literature, program director surveys, and focused interviews and site visits organized into a partnership planning framework, the research project sought commonalties and promising practices in community-based and school-based, environmental service-learning partnerships. Finally, four case studies of high-quality programs are used to shed some light on how partnerships overcome barriers or challenges to sustaining environmental-service learning in each organizational milieu. Recommendations for sharing promising practices, including strategies for sustainability, as well as, suggestions for how the Corporation can support environmental service-learning, are summarized in the conclusion.

The research design combines mixed methods, some quantitative but mostly qualitative, and builds on previous scholarship with an emphasis on sampling from the field. From the beginning the intent was to produce some tools and recommendations to further information sharing, partnership development, and the overall sustainability of high-quality programs.

Both school-based and community-based service-learning are considered in this research. The issues of school reform; how service-learning can be integrated into curriculum standards; and, how service-learning may reinvigorate students and their teachers are interesting topics, but they are beyond the scope of this research and the expertise of the researcher.

This research paper is intended as a springboard for further conversations among practitioners, and to assist grantors, program officers and evaluators in seeing more clearly, the benefits and challenges of environmental service-learning. The paper also suggests policy directions to develop more appropriate support for these programs in the future. The appendices offers a collection of resources for building sustainable, environmental service-learning partnerships—including a sample partnership planning framework and an annotated bibliography of related resources.

DEFINITIONS FOR THIS RESEARCH PROJECT

CIVIC STEWARDSHIP:

Civic stewardship means understanding personal responsibility to the community and the environment, and demonstrating long-term commitment to a “home place” through ongoing service.

ENVIRONMENT:

In this research project, the definitions for environment come from youth. To some it means the natural environment—others relate environment to neighborhood, or “home place.” Environment as a context for service-learning can mean any of the following: neighborhood beautification, recycling, school or community gardens, landscaping, watershed/wetlands/habitat restoration, water-quality sampling, sustainable agriculture, wildlife rehabilitation, park and greenbelt development or improvement, etc.

ENVIRONMENTAL SERVICE-LEARNING:

Service-learning is an educational strategy linking youth with service opportunities in the local environment, neighborhood, or community. The hands-on and outdoor elements have the added value of connecting youth to issues of environmental sustainability, and positive change, through civic stewardship. Projects that connect the human and natural communities—and, involve long-term commitment (civic stewardship) and follow-up are addressed in this study—rather than trail building in a remote wilderness or an annual clean-up activity.

PARALLEL PROCESS:

A term used to describe simultaneous effects or behaviors which happen at the administrative level of an organization that are consciously or unconsciously mirrored by the sub-grantees or field operations of that same organization.

PROGRAM SUSTAINABILITY:

Program sustainability is a term used for how to make impacts of the program last. This may include a long-term plan and multiple strategies that differ according to the size, organizational setting, and available resources of each program.

PROMISING PRACTICES:

The concept of “promising practices” is offered as an alternative to “best practices”. They are suggested by the researcher from the literature and this investigation, only. Thus “promising practices” reflect what is happening in the field,

regardless of the organizational setting, that may link youth to service in the environment through community partnerships.

SERVICE-LEARNING:

The National and Community Service Trust Act of 1993—defines service-learning as, "...a method under which students or participants learn and develop through active participation in thoughtfully organized service that is conducted in and meets the needs of a community; is coordinated with an elementary school, secondary school, institution of higher education, or community service program, and with the community; and helps foster civic responsibility; and is integrated into and enhances the academic curriculum of the students, or the educational components of the community service program in which the participants are enrolled; and provides structured time for the students or participants to reflect on the service experience."

SUSTAINABLE COMMUNITIES:

A sustainable community seeks to balance the natural and human environment. This philosophy also addresses issues of social equity and environmental justice; looking ahead to ensure that our actions today, do not have negative impacts on current populations or future generations.

YOUTH:

For the purposes of this project, the term "youth" refers to K-12 age youths, grouped according to the educational level of schooling, approximately 5 to 18 years of age. It does not include corps members or college students.



REVIEW OF LITERATURE

The combined practice of environmental education and service-learning is frequently referred to as environmental service-learning. Opportunities for matching environment with service-learning have expanded through national service initiatives, such as AmeriCorps and Learn and Serve America. The review of literature begins with the role of the Corporation for National Service in supporting environmental service programs. To determine where environmental education and service-learning interface, environmental education guidelines, environment as an integrating context for learning, and service-learning elements of practice, are reviewed. Finally, studies on service-learning partnerships and collaboration are examined and then, formulas for designing sustainable program models for environmental service-learning partnerships are suggested.

The marriage of environmental studies and service-learning in higher education has been called a natural fit (Ward, 1999). The rationale for combining environmental education and service-learning can be explored following a similar path. Environment can transcend subject matter and be used as an integrating theme for instruction (Lieberman & Hoddy, 1998). The trend of thematic, integrated learning in environmental partnerships needs to be linked to the development of national service initiatives, organizational collaboration, and program design—to ensure that the marriage lasts.



ENVIRONMENT AND THE CORPORATION FOR NATIONAL SERVICE

In 1996, a planning group coordinated by the former Center for National Service and the Environment developed an agenda for a clinic on environmental service-learning. Not only did the clinic fail to materialize, the Center was then closed.

The Corporation's track record on service and the environment is a mixed bag. As one of the Corporation's four priority areas Environment has not been a strong item on the menu. More emphasis and even the thematic integration of environment across streams, as a context for service, would demonstrate a stronger commitment to environmental service. Clearly, the Corporation only reflects the ambivalence dominant in mainstream society. Competing economic and environmental agendas have politicized environmental issues, nationwide. Promoting environment-based service—across streams of service—would follow the most recent environmental education trend, and apparently a strategy that works, environment as an integrating context for learning.

HIGH-QUALITY ENVIRONMENTAL EDUCATION

Environmental Education research has generated multiple models for creating a framework of guidelines, with similar outcomes (Simmons, 1995). Beginning with the Tbilisi Declaration in 1977, several overlapping environmental education themes have emerged. In 1999, the North American Association for Environmental Education (NAAEE) developed a framework and self-assessment tool based on four strands: (1) questioning and analytical skills; (2) knowledge of environmental processes and systems; (3) analyzing, processing, and addressing environmental issues; and, (4) personal and civic responsibility (NAAEE, 1999). An emphasis on citizenship—rights and responsibilities—is included in the third strand, under “decision-making and citizenship”. In the second strand, “knowledge of environmental processes and their systems,” youth are encouraged to examine cultural perspectives on the environment, as well as, an awareness of individual and group behavior. Throughout the document, the term “action” is used rather than service to describe youth activities in the environment.

The inclusion of the term “action” and the omission of the concept of service, may be a limiting factor of the newly developed Environmental Education Guidelines. National service promotes service and downplays action and advocacy. Regional politics can discourage action or advocacy, so that environmental education may be viewed as “anti-jobs” or “anti-industry.” Some of the most pressing environmental social justice issues are in low-income neighborhoods and rural communities of color. Corporation dollars may not provide relief for communities with environmental social justice needs, if the local solution is advocacy. Service-learning partnerships and the Corporation need to ensure that the design of environmental programs considers social equity, environmental justice, and cultural understanding, to reach all sectors of the communities they serve.

ENVIRONMENT AS AN INTEGRATING CONTEXT FOR LEARNING

Rather than develop a focus on content standards for environmental education, the environment can also be viewed an integrating context for learning (Lieberman & Hoddy, 1998). The study examined data from forty schools, nationwide, that use the environment as an integrating context for learning. Some of the common characteristics among schools that participated in this study were: (1) integrated instruction of subject matter; (2) collaboration as a teaching method; and, (3) problem/project-based learning.

The difference between project-based and service-based instruction was not clearly addressed in the research, but both philosophies stem from experiential education (Kendall, 1990). Just as the term “service” can be substituted for “action” in environmental education, project-based instruction is a form of experi-

ential learning that can be adapted to service as a next step. Thus, environmental education supports the application of learning to the local environment—and environment can also be used as an integrating context for service and learning across the curriculum.

SERVICE-LEARNING: ELEMENTS OF PRACTICE

Service-learning advocates have created their own standards and elements of practice to assess high-quality programming. The Seven Elements of High-Quality Service, include: (1) integrated Learning; (2) high-quality service; (3) collaboration; (4) student voice; (5) civic responsibility; (6) reflection, and (7) evaluation (Service Learning 2000 Center, 1998). The Essential Elements of Service-Learning include two sets of benchmarks, eleven essential elements for effective practice, and five for organizational support. Included in the elements of exemplary practice are: maximizing the “student voice”; valuing diversity; communication and interaction with the community; encouragement of partnerships and collaboration; and, knowledge about, and sensitivity to, the people with whom they serve (National Service-Learning Cooperative, 1998).

There appears to be some confusion about the efficacy of community-based versus school-based, service-learning. Academia and the Corporation tend to use school-based models and standards to evaluate and assess community-based programs. Under these circumstances it's not surprising that community-based programs get short shrift. Further, little research has supported whether the field confirms these standards of practice for both settings. These criteria need further validation, and adaptation, to more authentically look at and evaluate effective practices for community-based programs. Caution must be taken that community-based service learning is not examined through a school-based lens.

ENVIRONMENTAL SERVICE-LEARNING RESEARCH

There are many characteristics that contribute to the good fit between service-learning and environment in youth/community partnerships. Haselkorn and Grandi (1999) concluded that environmental education and community service-learning helps students make connections between what they learn and how they live. Environmental service-learning projects are popular with teachers just beginning with service-learning (Wade, in Kendall, 1990). Saltz (1994) in a qualitative study of K-12 teachers (N=18), identified several factors that enabled and hindered the integration of community service-learning with an environmental focus into the curriculum. Enhancing factors included: (1) support from a community agency; (2) a supportive administration; (3) time for projects built into the school day; and, (4) connection to existing curricula. The barriers identi-

fied by teachers were: (1) no time to discuss curriculum strategies; (2) lack of assessment; (3) an “enrichment” only outlook; and, (4) lack of buy-in by other teachers. The research confirms the role of K-12 teachers as gatekeepers to the successful integration of service-learning, with an environmental focus, into the core curriculum. The long-term institutionalization depends on the school’s capacity to provide ongoing professional development, more teacher planning time, personnel (staff) for project implementation, and a broad-base of administrative support for adopting this teaching strategy (Hoppin, 1999).

In another related study, students were given pre and post tests, to measure the impact of the program on self-perception of skill-building. Fifth grade students (N=55) responded positively to the following skills when surveyed: (1) taking care of the community (78%); (2) working with others (73%); (3) planning projects (71%); and, (4) making decisions (71%). Sixty-five percent of seventh graders (N=175) identified a service-learning experience with an outdoor learning center as the one time they had participated in decision-making that made a difference in the community (Habib, et al., 1999). Other recommendations from the research included: patience with the evolutionary process of collaboration; and, developing the potential for connections to cultural, social, and political realms—in addition to science and ecology—to extend learning opportunities across the curriculum.

In alternative school settings, which typically have fewer scheduling constraints, there are potential benefits of environmental restoration-based service-learning to at-risk high school youth and their teachers (Moras, 1999; Clifton, et al., 1998). The Moras study showed a positive relationship to five variables in three alternative-school programs; (1) school attendance; (2) connectedness to community; (3) social responsibility; (4) problem-solving; and, (5) watershed stewardship.

These three studies identified several missing components of school-based community service-learning with an environmental focus: communication, assessment and ownership—amongst teachers. Time constraints of high school scheduling limit service-learning opportunities, except in alternative settings as described in Moras’ study.

The elements or practices that are common to environmental education, environment as an integrating context, and service-learning, are: (1) cultural awareness; (2) civic responsibility; (3) youth as decision-makers and, (4) application of learning to the local community/environment (Figure 1.). Whether it takes place during school time, or out-of-school time, youth engagement in environmental service-learning opportunities that foster leadership development and decision-making, cross-cultural awareness, and civic responsibility or stewardship, create more inclusive learning environments, and perhaps lessen the need for at-risk programs, if both settings are considered.

FIGURE 1: FINDING AGREEMENT AMONG DISCIPLINES

ENVIRONMENTAL EDUCATION GUIDELINES (EE)	ENVIRONMENT AS AN INTEGRATING CONTEXT (EIC)	SERVICE-LEARNING ELEMENTS OF PRACTICE	ENVIRONMENTAL SERVICE-EARNING “PROMISING PRACTICES”
students/youth investigate issues beginning in their own community	examining the varied outlooks of the topic from a cross-section of their own community	encourages partnerships and collaboration	integrates and values the community voice
questioning and analytical skills	emphasis on problem solving and projects	student voice	youth leadership development
personal and civic responsibility	appreciation for the environment and community	civic responsibility	fosters civic stewardship
examine cultural perspectives	comprehension of socio-cultural systems	values diversity	promotes cross-cultural understanding

SERVICE-LEARNING PARTNERSHIPS AND COLLABORATION

The Corporation for National Service, created by the National Service and Trust Act of 1993 has created funding opportunities that have launched and expanded service-learning partnerships. The design of each initiative includes language about partnerships—across streams of service—and, suggests the inclusion of advisory committees, needs assessments, celebration activities, and evaluation as forums to integrate the community “voice” (Sigmon, 1998). Collaboration, on the other hand, is taking partnerships to the next level.

The research on collaboration in the field of service indicates that developing sustainable partnerships is an evolving process (Taylor-Powell, et al., 1998; Sigmon, 1998; Pickeral & Peters, 1998) The typical funding cycle for national service grants is two to five years. Yet, a successful collaboration may take much longer to develop, perhaps more than five years (Sigmon, 1998). If the key to sustaining national service programs is developing sustainable partnerships, we need to learn more about how to build them. A clear understanding of what works and doesn’t work—from the field—must be communicated to programs, national service participants, community partners, evaluators, and grant-makers.

ENVIRONMENTAL SERVICE-LEARNING PARTNERSHIPS

There are several elements that may be involved in building environmental service-learning partnerships, that are different from other community service-learning partnerships. The obvious one is safety and liability (Tremper & Seidman,

1994). Less obvious is the challenge of working across organizational cultures. There is a level of comfort in working educator to educator, nonprofit to nonprofit. Partnering with agencies that may not have educating youth as a specific part of their mission/culture can be a barrier towards building a successful collaboration across organizational cultures (Lisman, in Pickeral & Peters, 1998).

Additionally, service-learning promotes youth leadership development and youth as decision-makers. Organizations and agencies may have different views of the role of youth “voice” (Batenburg, 1995; Sigmon, 1998). If environment and service-learning are a natural fit then planning and program design must factor in the challenges and barriers for successful partnerships and program sustainability, across organizational cultures and diverse populations. The Corporation and potential grantees need longer timelines for program development within the application and renewal processes. Partnerships without a history or track-record are still worth considering, if they are in alignment with their purpose, roles and responsibilities, and expectations.

SUSTAINING ENVIRONMENTAL SERVICE-LEARNING PARTNERSHIPS

Very little is known about what constitutes a high-quality environmental service learning partnership. The literature has focused more on service-learning and environmental education, separately. We have some idea of the impact the legislation expanding national service, and consequently environmental service-learning, has had on launching programs. It is less clear whether the Corporation for National Service has played a supportive role in guiding these programs in capacity-building, and hence, sustainability. By comparing the guidelines for environmental education, environment as an integrating context for learning, and service-learning elements of practice—during school or out-of-school time—several themes emerge: youth as decision-makers, community “voice”, cultural awareness, stewardship and/or civic responsibility.

To build sustainable, environmental service-learning partnerships, we need to start with two components, youth and environment. Whether service and learning are sponsored by a school, community-based organization, tribal organization, university, or a conservation corps—environmental service-learning partnerships may, or may not, lead to successful, sustainable collaboration. Thus, the fifth promising practice proposed by the research is: Planning for the long-term sustainability of the program. The challenges and barriers identified in the research—as well as—the practices that are common to environmental service-learning, can be applied to developing program models that best fit the communities for which they are designed.



METHODOLOGY FOR FIELD RESEARCH

"The focus of evaluating partnerships should not be on evaluating the community projects themselves...to evaluate the extent to which the partnership is working as a partnership and working toward the creation of sustainable democratic communities."

— C. David Lisman,
Community College of Aurora, Aurora Colorado

PROGRAM DIRECTOR SURVEY

To determine some commonalities among environmental service-learning programs a sample representing a broad range of programs, both within and outside the national service network, was identified through an AmeriCorps database, state offices for Learn and Serve America, the Constitutional Rights Foundation, and the National Service Learning Conference. A two-page survey was sent to program directors and service-learning coordinators with both closed and open-ended questions. A total of 116 surveys were distributed, and forty-one surveys were completed and returned representing nineteen states. Thirty-two respondents met the following criteria: (1) the program has been operational for at least one year; (2) the program uses service-learning as an educational strategy; and, (3) a minimum of 25 percent of the program's youth service activities take place in the local environment. One additional criteria, "willing to participate in a follow-up interview" was pivotal in deepening the conversation on environmental service-learning.

FOLLOW-UP INTERVIEWS

To suggest some promising practices, a series of nine open-ended questions were asked of twenty respondents to the survey that the researcher was able to contact. The follow-up interviews to the Program Director Survey clarified the purpose of the project to respondents, and delved further into how they approach partnering. Questions were based on the promising practices identified through the research, including how partnerships are planning for future program sustainability.

From the interviews, twelve "high-quality" environmental service-learning partnerships met at least four of the five following criteria or promising practices: (1) encourages youth leadership and decision-making; (2) integrates and values the community voice; (3) fosters civic stewardship; (4) provides opportunities for cross-cultural connections; and, (5) plans for the long-term sustainability of the program. The responses from these dozen programs are organized thematically in the results section.

CASE STUDIES

Four study sites were identified for case studies, three were selected from the twelve mentioned above, and one was recommended by a former National Service Fellow. Both community-based and higher education-based, environmental service-learning partnerships were selected for their potential to partner with both school-based and community-based service-learning programs. An effort was made to find similar programs, in two distinct organizational milieus—service corps and universities—to compare the academic research with field practices and to test applicability and relevance of a planning tool, a partnership planning framework for program development, based on the proposed promising practices of environmental service-learning partnerships. The framework is a simple one page template that considers three stages of program development: starting, growing, and sustaining high-quality environmental service-learning partnerships. The case studies were based on site visits and interviews with students, teachers, community partners, and national service participants.

EVALUATION

Each data collection method and instrument included an evaluation piece to be completed by participants in the study. This design element provided a quality control mechanism to inquire whether the process was “user-friendly”, clarified questions and answers, and determined the relevance of the topics to the respondents and their programs.

MOTIVATION AND CAVEATS

This research was conducted by a former AmeriCorps program director. One of the partnerships examined in this project evolved out of that program. Although the partnership was launched after her retirement, some familiarity/bias should be assumed. It seemed to her that the key to the success and sustainability of environmental service-learning programs was program design and partnership alignment. To discover how programs coordinate, build, and sustain environmental service-learning partnerships was the motivation for developing this research project.



RESULTS

“There is a recurring phenomenon nationwide at service-learning conferences...our session designs tend to gloss over the challenges that confront us.”

— Michael Malahy Morris,
Director College of Education Policy Center,
University of New Mexico

The results of the research project are organized sequentially to answer each of the three research questions: (1) What are some of the common characteristics shared by environmental service-learning partnerships?; 2) What promising practices can be identified for high-quality environmental service-learning partnerships?; and, 3) What challenges and barriers to sustaining high-quality environmental service-learning are experienced by partnerships in the national service network?

The program director survey data indicate some common characteristics of environmental service-learning programs. Then, the interview data are clustered to reflect how partnerships relate to the suggested promising practices, and how they interpret environment and service-learning in the field. Finally, four case studies illustrate some strengths of environmental service-learning partnerships, and examine the barriers to program sustainability in two distinct organizational settings. After each section is a discussion of how the results apply to the research questions.



CHARACTERISTICS SHARED BY ENVIRONMENTAL SERVICE-LEARNING PARTNERSHIPS:

INTEGRATED LEARNING

Science and environmental science are mentioned most frequently as intentional learning outcomes, however, an overwhelming number of programs integrate environmental service activities into multiple subjects and skill-building areas.

PROJECT-DRIVEN FOCUS

Few programs identify a single theme such as water-quality monitoring, school/community gardens, or recycling as focal point for environmental-service-learning. Rather, respondents indicate that environmental service activities are predominately project-driven and vary according to season, locale, and student interest/community need.

CULTURAL CONNECTIONS

The returned surveys reveal connections to Native American, and other culturally diverse, communities primarily in gardening and water-related programs. Only one program surveyed is sponsored by a tribal-organization.

FOSTERING STEWARDSHIP

Most of the programs indicate that local projects in the environment are long-term and non-episodic, rather than one-time-only affairs. The term “stewardship” appears frequently in open-ended responses.

FREQUENCY OF ORGANIZED REFLECTION AND RECOGNITION

Overall, reflection and recognition/celebration activities, as described by respondents, appear to be rather episodic. Primary school-aged youth, and youth in urban and suburban settings may be less frequently recognized for their service contributions than rural and secondary school-aged youth.

OLDER YOUTH AS LEADERS

Environmental service-learning programs offer fewer leadership opportunities for primary school-aged students, and more opportunities for youth leadership in rural communities, with older youth.

PROGRAMS RECOGNIZE THE VALUE OF COMMUNITY INPUT

Community members are most consistently described as having a “voice” in rural communities through AmeriCorps partnerships at all age levels of youth programming.

MORE LOCAL PROGRAM SUPPORT—LESS SUSTAINABILITY PLANNING

In programs conducting 50 to 100% of service-learning activities in the local environment, rural programs report more local support and strategies for program sustainability. Most programs overall, indicate evidence of more local support, than concrete plans for sustaining their programs.

CONNECTIONS TO OTHER ENVIRONMENTAL SERVICE-LEARNING PRACTITIONERS

In closed-ended responses, program directors and service-learning coordinators select conferences, newsletters, and web sites as their preferred methods of networking and professional development.

DISCUSSION

Survey respondents confirm the tendency of organized reflection of youth service activities in service-learning to be rather sporadic. Although this finding conforms to the literature for service-learning in general, there may also be a problem with terminology since some of the respondents come from the environmental education and science education domain, rather than service learning (Ward, 1999). Had the question been, "...describe the ways in which you debrief with participants before, during, and after service," there may have been less creative answers but perhaps more universal comprehension of the concept.

Environmental service-learning projects, on the other hand, are more likely to be long-term, rather than episodic and stewardship is an outcome frequently mentioned by respondents. It is a bit ambitious to leap from stewardship to citizenship, though environmental service-learning tends to emphasize personal responsibility through stewardship. Civic stewardship is the term more than one respondent uses to describe this effect.

Primary school age-youth appear to have fewer opportunities for leadership development, decision-making, organized reflection, and celebration/recognition of service activities. Environmental projects may involve issues of safety and liability more frequently than other service-learning activities (Goldstein, in Kendall, 1990), limiting leadership development and decision-making for younger participants. A shortage of occasions for reflection and celebration with younger participants is more difficult to explain. Unfortunately this study does not give us those answers.

Survey data also suggests that rural middle and high school-age youth, in community-based or school-based programs, that partner with AmeriCorps and Learn and Serve America, are most likely to have a high-quality, environmental service-learning experience. Yet, ruralism alone does not constitute a high-quality program. The twelve programs identified as having all or most of the five promising practices of high-quality, environmental service learning programs are scattered all over the map

Programs with an AmeriCorps component tend to have more community involvement, than Learn and Serve grantees. When comparing AmeriCorps and Learn and Serve America, AmeriCorps partners are more inclined to view the community as planners and have some ideas for long-term program sustainability. AmeriCorps often brings additional human and financial resources to programs, whereas Learn and Serve grants may or may not include funding for coordination to facilitate school/community relationships. Environmental service-learning projects that are off the school grounds or sponsored by a community-based organization during

out-of-school time may, by necessity, involve more complex partnering and community involvement to coordinate access, land-use decisions, and project support, and thus provide the rationale for partnering with AmeriCorps.

Regardless of their national service affiliation, program directors and service-learning coordinators of environmental service-learning partnerships indicate they need help with sustainability planning and more structured and unstructured opportunities to share information with their peers

PRACTICES OF HIGH-QUALITY ENVIRONMENTAL SERVICE-LEARNING PARTNERSHIPS

The follow-up interviews (N=20) were conducted by telephone and ranged in length from twenty minutes to almost one hour. Several themes emerged from these conversations, including different field terminology, discussions of the value added of service-learning to environmental subject matter, and how programs interpret the suggested “promising practices” of environmental service-learning: (1) encourages youth leadership and decision-making; (2) integrates and values the community voice; (3) fosters civic stewardship; (4) provides opportunities for cross-cultural connections; and, (5) plans for the long-term sustainability of the program.

INTERPRETING ENVIRONMENT AND SERVICE-LEARNING, IN THE FIELD:

Environment has a broad definition

In the field, the term environment has a broad definition. Youth are encouraged to interpret what their environment is, “..We inquire ...‘what is your environment?’ It includes from their immediate surroundings to the whole world.” Both the physical and social environment, are considered by programs, including such issues as: social justice, teen pregnancy, accessibility for the disabled, safe drinking water, neighborhood beautification projects—and, the natural environment. One program facilitator explained, “...students ...have the opportunity to be... stewards to create cleaner, safer neighborhoods, which are mostly low-income....”

Many terms are used to describe environmental service-learning

Field terminology used to describe service-learning with youth in the local environment includes: service-learning, environmental service-learning, service adventures, and community service-learning with an environment focus. Apparently what we call it does matter, according to a program coordinator, “...if we call it service-learning—the kids won’t want to do it!”

The youth “voice” is valued...or at least frequently mentioned

Program directors and service-learning coordinators mention “youth voice” more frequently than input from other stakeholders and participants. One program coordinator comments, “...we work with organizations that very much share our mission of youth voice....”

BENEFITS OF ENVIRONMENTAL SERVICE-LEARNING IN SCHOOLS, INCLUDE:

Environmental projects have the potential to draw parent’s interest and participation

The draw of environmental service-learning on parents and siblings, as well as community, is described in several interviews. Youth want to show off their work, “...they bring their parents in on their own time...” comments one program director. Another respondent confirms the potential of outdoor projects to attract families, “We were told a story about a student who took his family down to the site in the pouring rain—he was so enthusiastic and proud.”

Environmental service-learning engages non-traditional learners

Non-traditional learners are frequently described by teachers and directors as more successful in out-of-class settings, with hands-on learning opportunities. One teacher saw a dramatic difference in student behavior, outside of the classroom “...they like to go into the woods and sit quietly.... I can’t get them to leave...they just want to sit and keep writing in their journals!”

Schools use environment as an integrating context for learning

According to an AmeriCorps member in a school-based program, “...the environment piece is integrated into the whole school...into the school/cultural core.”

Science is a frequent focus; service-learning is one method used for instruction

Typically, in the school environment, science provides the contextual framework for environmental service-learning. In some cases, science is stressed more than service, “...we use service-learning, but not necessarily as our entire goal for instruction....an environmental component sometimes, mostly through science.”

Service-learning helps get environmental education into schools

By linking service-learning and environmental education, environmental education—gets a fresh coat of paint and a new relationship to the curriculum. A pro-

gram manager explains, "It's a way to bring environmental education to the public schools... they (schools) have been receiving environmental education programs....for thirty years now...what we have done is very different...they (youth) relate what they do back to the community."

COMMUNITY-BASED, ENVIRONMENTAL SERVICE-LEARNING "ROCKS!"

Community-based, environmental service-learning offers high-quality programs

Youth in out-of-school time, participate in structured, high-quality, environmental service-learning coordinated through community-based organizations. The director of a youth-driven project in an urban setting comments, "...a service ethic...very strong learning component...a huge youth program in the summer. Intensive education on environmental issues (solid waste, beautification...) through cross-training, coordination, and peer-to-peer. We bring in experts for this intensive 8 week program. Every week there is a clean-up or service project. The summer culminates in a conference called, 'Youth Environmental Collaborative Conference'".

Time for developing partnerships and in-depth projects

Community-based service learning provides summer and after-school programs, without the time constraints and curriculum standards issues of schools. The director of a community-based program describes, "...on Mondays and Tuesdays for eight weeks we have activities with a different theme each week—like ecosystem management. The kids learn about thinning trees and work with an AmeriCorps team. The kids get the educational introduction at the beginning. We did a solar oven demonstration, but ate cold hot-dogs because it was an overcast day!"

Youth engaged in service-learning in out-of-school time become leaders

In youth development programs that offer environmental service-learning opportunities, youth are directly involved in community problem-solving. According to an urban program director, "...two third-year students supervise other youth...I meet with them only to give direction...they run the meeting...oversee the reflection piece with other youth...they learn skills which gain them the respect of other adults."

Community-based, environmental service-learning embraces volunteers

Unlike the school culture, the organizational culture of community-based organizations has systems and structures that welcome, and depend on, a strong cadre of volunteers, as this program coordinator explains, "We depend heavily

on volunteers for making positive changes with youth and public education.”

Community-based service-learning offers learning opportunities that schools may not

Programs coordinated through community-based organizations may compliment and enhance what is happening for youth in schools, or may provide their only significant contact with environmental service-learning. According to one respondent , “A couple of different things happen, the students learn more, conservation, community, self, and partner organizations. They may realize new skills and talents that schools don’t necessarily develop.”

Community-based organizations foster relationships first

During out-of-school time, community-based organizations recognize the importance of relationship-building with youth participants, and seek positive youth-adult experiences, that may be missing from other aspects of their lives. The coordinator of a corps-based program explains, “Service-learning is our way of addressing the self-esteem—self-concept issue—where kids have a say—where they feel listened to. We try to develop student relationships, beyond a one-shot deal. A lot of the students have adult experiences where adults sort of swing in and swing out of their lives.”

HANDS-ON LEARNING THROUGH VISIBLE PROJECTS:

Environmental service-learning projects are visible and hands-on

Not only are projects hands-on, but they grab the attention of the community when conducted in outdoor, public settings. One university-based program director comments, “First, it’s hands-on. It makes student’s education more realistic, enjoyable, and more fun. We have signs that identify the project. On an annual service day we are more visible—all over the place—got shirts for everybody—the Chamber of Commerce is involved. What we try to do, instead of telling them what to do (the community)—we do it. We just pick up the litter, rather than lecture.”

Hands-on, environmental service-learning is a strategy for “at-risk” youth

When youth do not thrive in traditional classrooms, they tend to respond to smaller group settings with hands-on learning opportunities, through environmental service-learning. A teacher from a small, rural alternative school, explains, “So many of these kids do a lot better with hands-on activities...environment was the most accessible resource, and there are needed projects with the river so close....” Another program coordinator, working with traditional schools,

offers a similar response, "Students who have a difficult time in the classroom, hands-on works for them...."

THE ADDED VALUE OF LINKING ENVIRONMENT AND SERVICE-LEARNING:

Environmental service-learning teaches by example and makes learning fun

A university-based project director comments, "If it's enjoyable, they'll learn more. You can teach environmental concepts by example...through kayaking, for example, by not dragging the kayak down the riverbank...through a soft-sell...by modeling good environmental behavior."

Even vandalism is a teachable moment...

Youth projects in the local environment don't always go as planned. Weather, logistics, even vandalism can provide "teachable moments" as this program director explains, " Vandalism is a provocative experience, and students feel hurt by it—it adds another layer of investment."

Service-learning in the local environment connects youth to their "home place"

Our society has become estranged from our relationship to the land, even our communities. Yet, environmental service-learning fosters a "sense of place." How this occurs is described by university-based program director, "service-learning gives them a different view of the land, provides them with a concept of home place."

Developing the whole person

Environmental service-learning helps young people develop, and is not just about academic development. One urban-based program director explains, "...in so many ways it fits the psychological development of students, K-12, being aware of their community, how they fit in the community..." Another program coordinator suggests, "...we need to reach the affective domain, to teach beyond "facts" to get students to care about the environment; it's kind of the heart of it."

ENCOURAGES YOUTH LEADERSHIP AND DECISION-MAKING

Youth gain credibility in their community through environmental service-learning

The community sees kids differently, and in a positive light, through environmental service-learning. An urban-based program coordinator comments, "How

the kids connect to the community? The kid voice is part of the project. They pick their project...first they do a community inventory (asset-mapping).The idea is that you don't do for...you work with (the community)...This builds credibility for kids in the community."

Participation in community forums reinforces the concept of youth as stakeholders

Integrating the youth voice into community planning and decision-making is critical for success and sustainability of the program. The composition of a community planning group is described by an university-based program director, "...We have an education advisory committee, which includes high school students, the former mayor, and it meets every six weeks to review projects, do strategic planning...."

Youth need to have peer leadership opportunities as well...-

Youth respond positively to leadership and decision-making opportunities in peer group settings. One urban program coordinator has this to say about their youth advisory group, "...We have a youth advisory board (middle school students) from nine different schools... The advisory board identifies what the needs are, what needs to change, what other opportunities they would like to have in the program...."

Kids discover new things about their communities

Kids may learn things about their community that lead to positive change, for an example, one project coordinator describes an unexpected outcome, "...kids distributed water conservation stickers throughout the city using the public bus system—it took a lot longer, but the students were very thorough. They gave input into the public transportation system afterwards!"

Youth gain new skills and self-confidence

Through the interactions with adults in environmental service-learning partnerships, youth have opportunities to gain presentation and communication skills, "Kids present to the school board" in one program, and "...Kids do all the organizing for the garden party—decorate, serve food, perform...."

INTEGRATES AND VALUES THE COMMUNITY "VOICE"

Youth respond to the needs they identify in their communities

Through needs assessments and community asset-mapping youth are encouraged to identify their community and "needed" projects. The process of finding

what the community assets/needs are can be through trial and error as this program coordinator describes, "...the youth identified youth centers and libraries ...schools, the youth felt, had funding and resources....The youth role was just 'helping the teacher out'....The library was one site where their service was needed...the program moved into the community."

AmeriCorps members build community and environmental agency relationships

In some programs, AmeriCorps members are responsible for making the connections to environmental and community partners. The partnership coordination frequently occurs around projects, as this program director explains, "...members and partners meet in different community settings....We have one to four projects on Saturdays...monthly volunteer days...we survey 10 percent of the adults and 10 percent of the students—also, the partnering organization gets an evaluation form."

Advisory Committees are the mainstay of community input

Respondents may complain about them, but advisory committees are a popular forum for the community "voice." This program coordinator describes his experience, "...we have a twelve-member advisory board, representing a cross-section—school, youth bureau, technical people...they come to us now...an informal type of group that knows what we do."

Community helps improve the environmental service-learning "product"

Partnerships often report reliance on community experts for technical advice and continuous program improvement. A suburban-based AmeriCorps member reflects, "We try to be sure that we have the community stakeholders involved and giving input. We have regulatory issues...the water district and the museum ...help with quality control...changing the product for the better...creating a win-win situation...."

FOSTERS CIVIC STEWARDSHIP

Stewardship is a common thread

A second-term AmeriCorps member comments, "... learning is through doing...imparting the stewardship...the hard data is relatively low...it's really the stewardship product...a human element, they may change their way of living; their relationship to the natural environment."

Citizenship through environmental service-learning

Youth seem to connect their service to the environment with civic responsibility. We have to be careful what we call it; that it truly captures the youth connection to community, through the environment. As this practitioner from a community-based organization cautions, "Service-learning is kind of a buzzword right now...a way to create better citizens, who are more interested in their community...connecting youth to the environment—it helps students think twice."

Civic stewardship promotes the concept of youth "giving back" to the community

The concept of civic stewardship is articulated by several respondents. The concept is described by an urban program director as, "We value civic stewardship and responsibility, and we use a project-based approach....We are totally committed to the idea that these kids feel connected—working with people in the community provides the critical real world piece....The sense that you can give back." This sentiment is echoed by another respondent, "...service-learning creates the opportunity for students to be invested in their community, helps them want to stay involved, perhaps return to the community and be part of environmental decision-making."

PROVIDES YOUTH WITH OPPORTUNITIES FOR CROSS-CULTURAL UNDERSTANDING

Diversity is a fact of life in the urban environment

Programs in the urban environment have few formal ways to promote cross-cultural understanding, instead, "...students participate in diversity training through other programs, then they teach me! It's just part of being in an urban environment," comments one program director.

Structured cultural connections are sometimes limited to service events

In the urban environment the cultural connections are more likely to be informal, explains one program director, "... diversity is celebrated through the annual Martin Luther King event and block parties...youth in each (environmental) Club are extremely diverse—socio-economically, sexual orientation, etc." A program director in a suburban program mentions that, "...a Native American elder came to speak and we did a closing ceremony," but admits that there is no organized effort to bring youth together culturally, in any formal way.

AmeriCorps programs help bring cultural diversity to rural areas

Many of the rural programs directors indicate they do not have diverse populations to work with. An environmental service-learning coordinator, in an urban

setting, complains about the lack of member diversity in their urban corps education program. Yet, another corps-based program director, in a rural program comments, "This is a rural farming community with lots of socio-economic problems...our corps is very diverse; the corps provides the community with opportunities for appreciation for diversity..."

Some programs are creating a forum for cultural issues

Although, the concept of structured activities does not resonate for some programs, others are considering it...as this program coordinator comments, "...we are developing an activities 'toolbox' that includes issues like tolerance and cross-cultural perspectives." Another program coordinator, a former AmeriCorps member, offered this anecdote, "...We played a game called "Earth Friendly Beads" and the white bead was supposed to stand for people...well, we couldn't go with that, so the kids selected a purple bead instead...."

Respondents feel that their partnerships and projects are inclusive

Cultural diversity is not always mentioned as core to each partnership, but inclusion often is. A project coordinator from an urban-school gardening program explains, "... We are very inclusive...kids with different needs...we have autistic , ADD, everyone participates."

Cross-cultural connections can be powerful when they happen intentionally

When programs serve diverse communities and find projects that provide cross-cultural connections, they can have positive impacts on the community. For an example one program coordinator reports, "...A partnership applied for a mini-grant...a Native American youth service organization and ...a swim team...to address the issue of high drowning rates among Native American youth...(they) used a buddy system, and started out just making friends—some kids were afraid of the water—at the end, the kids were jumping in the water and their families, too!" This partnership has been written into the grant for next year."

DEVELOPS A PLAN FOR THE LONG-TERM SUSTAINABILITY OF THE PROGRAM

Community-based organizations sponsor after-school clubs

Many environmental service-learning programs focus on after-school clubs for their activities. A very effective program strategy is described by its director as, "...six clubs, meeting five times a week, with one planning day...partnering with other agencies to take on the sponsorship of a club...and the host agency can incorporate their environmental message into the clubs....One sponsorship is into its second year...."

Sustaining service-learning in schools is difficult for community-based organizations. Service-learning is a hard sell if it's not part of the whole school reform package. Programs offered by community-based organizations are received, but infrequently integrated into the curriculum, or sustained, long-term. A corps-based program coordinator explains, "The schools love us and just keep calling us...but, they were not interested in financially supporting the project at all...there is not a lot of capacity being developed within the host organization...sometimes there is an attitude of us/them."

Clear roles and responsibilities—and, expectations about who is going to do what....

Frequently, partnerships are thrown together to go after a grant. Without clear intention, and purpose in partnering, it's not surprising that programs struggle to meet their objectives. This program director describes a well-constructed plan for sustainability through local partnerships, "We are in the midst of looking at a plan....We have started meeting with the education committee to form a school district, university and city partnership with permanent funding for an Urban Parks Education Coordinator."

Builds a bridge between community and school-based programs

Simply moving environmental service-learning into the curriculum may not, in fact, sustain it beyond the enthusiasm of the current trend. To really strengthen this connection, according to one program director, "...is about teaching, a train the trainers—working with scout leaders and elementary school teachers—building capacity with youth leaders..."

For schools to sustain it, service-learning needs to address academic standards

Even though it is only one part of developing youth, the academic "bottom line" is important to the school's accountability for academic achievement. Service-learning, according to this program coordinator, has yet to validate a strong academic connection, "It's a real challenge when working with the school district...the district is coming under criticism for not supporting more academic standards....We need to prove the link to the standards....Making the academic connection is going to improve sustainability....Service-learning research has not demonstrated conclusively the academic impact of service-learning on students."

Locating study sites closer to the school helps sustain environmental service-learning

Transportation is a big issue for sustaining programs, both in schools and during

out of school time. By focusing on sites closer to the school, programs are literally one step closer to sustaining their projects. A university-based program director commented, "To look beyond just this plot of land...we do very well in the schools...involving them in other areas besides (the study site)—to look at sites closer to the school site."

DISCUSSION

Collectively, programs use a broad brush to paint their environmental pictures. Few respondents differentiate between service-learning and environmental service-learning when they describe their programs. In fact, some downplay these terms by explaining that service-learning is only one educational strategy they employ, and that service-learning alone will not reform education. There is considerable agreement about the value-added of environmental service-learning to environmental and science education. Although science is the subject most frequently mentioned most programs integrate environmental service-learning into multiple subject areas.

As to the suggested promising practices, youth leadership and decision-making opportunities, cultural understanding, and planning for program sustainability, are not as frequently identified as priorities or program goals, as integrating and valuing the community "voice" or fostering civic stewardship.

Environmental partnerships may have some constraints for youth leadership based on pre-determined agency needs or priorities, regulatory issues, or landowner restrictions. Articulating the service-learning philosophy with potential environment-based partners may be a critical factor in developing youth leaders and in sustaining agency partnerships.

Less obviously diverse communities—frequently rural—report challenges in relating cross-cultural connections to their programming. Urban programs on the other hand consider diversity and intercultural relations to be a "fact of life" in the big city. One program director confesses that trying to connect the message of Dr. Martin Luther King to an environmental service project is a real stretch for them. The program director of a tribal-based, service-learning program emphasizes the spiritual aspects of Native American cultures regarding the environment and recommends that these elements be woven into all environmental service-learning programs. David Orr (1994), author of "Earth in Mind" explains, "...we must redesign curricula and school environments as ecological learning communities...to allow children to make a lasting connection...rooted to a home place...the urban neighborhood as well as the rural hometown."

The strategies for sustaining programs, long-term, depend on the size, setting, and complexity of the program. Smaller rural programs call upon many “ready made” environmental service projects—accessible by simply walking outside the classroom door. Numerous environmental service-learning activities take place during out-of-school time, through environment-based clubs, sponsored by community-based organizations. Learning outcomes are often set by the sponsoring organizations. As a sponsor, the community-based organization is by far the strongest advocate for sustaining environmental service-learning, especially during out-of-school time.

Environmental projects that call for travel to and from the site, getting dirty, and involving long service hours, may be more sustainable during out-of-school time, or better suited to the more flexible schedules of charter and alternative schools.

Several grant programs are mentioned by respondents including: Eisenhower Grants for science programs, Howard Hughes Foundation, and the Robinson Mini Grant Program, available through the Constitutional Rights Foundation. None of these will replace national service funds, but they may augment them. Other strategies for funding include setting up local endowments and generating income from student recycling projects. One program administered by a middle school student council reviews teacher’s proposals for allocation of youth-generated recycling revenue.

No one strategy will sustain environmental service-learning. To identify multiple strategies, as well as, barriers and challenges faced by partnerships in the field, four sites were selected as case studies.

CASE STUDIES

These four case studies illustrate some of the challenges and barriers to program sustainability. All but one of the case studies involved a site visit. Two sites are service or local corps-based partnerships and two are university-based partnerships. One case study is of a program in an urban/suburban setting, two are suburban, and one is mixed rural/ suburban. These program profiles are organized into individual partnership planning frameworks developed from the promising practices (Appendix A.) The framework is a template with three stages of program development: starting, growing, and sustaining. Although each individual program probably has more stages of development, the rationale for three was to keep the planning tool simple. The case studies are based on site visits and interviews with students, teachers, community partners, and national service participants.

Each case study highlights one particularly strong program characteristic, indicates the status of Corporation funding at the time of the site visit, and describes options the program is considering, or might consider, to keep the program up and running.

SCIENCE STEWARDS: A CROSS-AGE SERVICE-LEARNING CASE STUDY

Service-Learning through Science Education

Located in the heart of a thriving suburban community, the Science Stewards Program is a partnership of the local nature center, a high school, the local water agency, a science education nonprofit, and an AmeriCorps program sponsored by a service corps. Science Stewards provides hands-on science experiences for high school students and their primary school buddies through a water-quality testing program conducted on a local creek near the high school. The nature center's education director coordinates curriculum resources and volunteers; the high school's lead science teacher directs the integration of field practices into the core curriculum; the AmeriCorps members assist with communications, evaluation, and training.

History of the Partnership

The partnership evolved from the high school's long-term commitment to service learning as an effective educational strategy. In 1997, the AmeriCorps regional supervisor met the nature center's education director at a conference where, due to unforeseen circumstances, they were thrown together to facilitate a workshop. Through the nature center, and the coordination efforts of an AmeriCorps member serving nearby, an introduction to the high school's lead science teacher was made. The program is popular with students. Students are recruited

by the school's service learning coordinator and the lead science teacher. Regulatory issues prevented the program from realizing their original goal of watershed restoration. The program turned to the local water district for guidance and was permitted to monitor a local creek and deliver the student collected data for the water district's records. Funding for equipment and curriculum resources was acquired through a foundation grant and a local coalition of business and industry.

Purpose/Vision

The primary purpose of the partnership is to instill a sense of stewardship in students. The application of science from the classroom to the local environment is an important part of the program, but not the primary goal. The integration of service-learning as a permanent feature in the core curriculum is well developed at this site, but relies heavily on AmeriCorps member's support. The cross-age service-learning component is a valuable piece of the program, but challenging to coordinate.

Program Design

The application of Partnership Planning Framework (see Appendix A.) to the Science Stewards partnership revealed strong relationships with relatively clear roles and responsibilities, and seemingly reasonable expectations. Communications and decision-making processes were less clear, probably due to a lack of planning time and no structured process. The program did not receive an AmeriCorps grant for the next round of funding, leaving the future of Science Stewards in question.

Role of National Service

The site's two AmeriCorps members had differing views on how they could best serve the community through the program. One second-term AmeriCorps member felt that he should be doing more capacity building and less coordination of activities. The other AmeriCorps member felt that responding to the needs of teachers and community partners was a reasonable role to fill.

Challenges and Successes

Students seem to be having a high-quality experience. There appeared to be a lot of student enthusiasm and teacher engagement at the site. Students were conducting water-quality testing with very little facilitation from adults. Spanish speaking students were paired with a Spanish speaking buddy when possible. Although the program appears to be building momentum the expansion and replication efforts will depend on finding another source of funding, and trained

individuals, to replace the AmeriCorps members.

One important element that will be difficult to maintain or expand is the buddy system with primary school students, bussed to the site from their schools. The high school is walking distance to the site and with some creative scheduling a shortfall in transportation resources would not be a barrier for the high school.

Promising Practices:

Youth Leadership - Youth leadership was observed in field activities, although not in program decision-making. Student leadership is encouraged through self-directed learning goals, and high school/elementary school buddies. One fourth grader explained, "...you get to do it on your own...it's pretty exciting to do it ourselves...we get to do it in high school...to find out how animals live in the wild...how cold the water needs to be for them to live...."

Community "Voice" - The community piece is integrated into the program through the nature center and adult volunteers. The water agency has an important, but passive role in the program. There was no indication of organizational barriers or turf issues between the schools and the community. Yet, schools are busy places and teachers are busy people. Much of the communication and planning takes place "on the run." One primary school teacher interviewed for this research commented, "...there needs to be someone who can coordinate between the school and the nature center."

Cross-Cultural Understanding - Although not directly integrated into the curriculum, cross-cultural connections are made through attempts to match Spanish-speaking buddies and through cross-age reading activities with books that include a cultural component. A high school student talked about her buddy, "Alberto has a hard time...I take more time with him...keep him interested." The lead science teacher is seeking more Native American service-learning resources to enrich the curriculum.

Civic Stewardship - The partnership is committed to providing opportunities for students to gain a sense of stewardship through service-learning in the local environment. The repeated, seasonal exposure to the creek habitat appears to be making an impact on how students view their relationship to the community and the environment. One high school junior commented, "...you can help your community no matter what age you are...I came to understand why the urban environment is the way it is....I am making students aware of what they have now...that they may not have it later...it could change and become a mall...."

Sustainability Planning - During the site visit, the partnership was informed that they were not funded for another year through AmeriCorps. The lead sci-

ence teacher felt that the program would continue, to some degree, but not at the current level or depth. The partnership will be looking for other funding sources and try to pull in more volunteers to sustain the role formerly provided through AmeriCorps members.

Looking Ahead

The partnership is strongly influenced by the lead science teacher and the nature center's education director. If and when either of these individuals retire or leave the area, there is no assurance that the Science Stewards program will continue. From the researcher's limited exposure to the program, the students observed demonstrated an enhanced understanding of their community as a result of participating in the program.

Options the Program Might Want to Consider

A higher education partnership may provide some additional incentives and support for teachers and program partners. Pre-service teachers from the university might serve in the Science Stewards Program as a part of their student teaching. Teachers from the Science Stewards Program could possibly receive continuing education credits through the university by participating in service-learning, cultural competency, and other professional development opportunities. Science and environmental studies departments could match university students with the water agency and the nature center to help train service-learning volunteers and to increase the organizational capacity of community partners to participate in the program through internships. Campus Compact and the American Association for Higher Education have developed resources for this type of higher education, community-based organization, and school partnership.

The partnership may want to consider looking at opportunities for student participation during out-of-school time, through the nature center, or other community-based organization sponsorship. Students that are not participating in sports or other structured after-school activities, may have additional leadership opportunities, with an environmental service-learning focus, through 4-H, Boys and Girls, or YMCA clubs.

A CASE STUDY OF AN ORGANIC, COMMUNITY SERVICE-LEARNING PARTNERSHIP

Environmental Service-Learning through Collaboration

The Environmental Serve and Learn Collaborative (ESLC) evolved out of a statewide AmeriCorps partnership. Management is provided by a regional service corps district and district staff, with a special project coordinator to run the national service and service-learning components of the program. The ESLC program blends traditional environmental education with a locally designed, service-learning strategy. The strategy is organic, in that it is not imported from another region, or part of a "canned curriculum" adapted to fit the local landscape. This attention to local nuances and needs has fostered strong partnerships with local agencies and organizations, working with youth during both school and out-of-school time. Partners include: YMCA, a local native plant nonprofit, a fisheries enhancement group, an alternative school, and the parks department.

History of the Partnership

ESLC was launched to provide a rapidly growing coastal and inland valley region with greater access to environmental education and service-learning resources through projects coordinated by AmeriCorps members and local youth, with the goal of developing youth leadership through service. In its second year, ESLC has broken away from the "mother ship" and written their own AmeriCorps grant to strengthen the service-learning aspects of the program and to provide a more organic, regionally applicable structure for operations. Recently, the program was notified that they would be approved for another year of Corporation funding and consequently will be able to launch their regional model.

Purpose/Vision

The vision of the ESLC program is to expand opportunities for youth to participate in service to the local environment with intentional learning outcomes and organized reflection, through needed service projects in the local environment. Although schools were initially the target audience, the coordinator of the program says, "...the schools love us, but the schools do not contribute to the cash match for member support." Community nonprofits and local organizations are willing to meet the match and develop outreach to youth during school time, however, it is less clear how service to the schools can be sustained over time, without addressing the school reform "big picture." The local school district relies on five-day nature immersion programs to provide much of their environmental education programming. Without a doubt, what ESLC offers is above and beyond what the local school districts provide for some students.

Program Design

The design of the ESLC program has many positive, regionally driven aspects. The host organization, a service corps, provides transportation, equipment, and liability coverage for projects. The service corps is adept at “getting things done” such as trail building, landscaping, and habitat restoration projects that address the local environment. Less familiar turf for the corps are the issues of school-based service-learning and education reform. The AmeriCorps members demonstrate considerable knowledge and enthusiasm for environmental service-learning content and for developing youth as leaders.

Role of National Service

There are two main reasons the ESLC program exists: (1) the service corps welcomes the resources from the AmeriCorps grant to extend their organizational capacity; and, (2) there is a recognized need for the services provided by the program as the county growth rate threatens the natural environment. The AmeriCorps members recruited for the program bring a new pool of expertise to the service corps. Current service corps members have the opportunity to apply for AmeriCorps service and to work with youth in a more professional setting. The role of AmeriCorps members in the local community was clearly valued by program partners.

Challenges and Successes

The most impressive characteristics of the ESLC program are the diverse, organic partnerships with local stakeholders, and the dedicated team of AmeriCorps members and their supervisor. Past AmeriCorps participants have made a transition into paid staff positions with local service organizations and nonprofits. The AmeriCorps team seems to recognize the limitations and strengths of the host organization and to work creatively within a strict organizational structure.

The K-12 schools have not been willing to support the program financially. An exception are the alternative and court/community schools. Next year’s program will focus more on these partnerships.

Promising Practices:

Youth Leadership -- The AmeriCorps members have demonstrated a commitment to ensuring that youth are provided with leadership opportunities through the ESLC program. The AmeriCorps director provided two examples of where youth were treated like “free labor” or where adults stepped in at inappropriate times and clarification of the youth role and program goals were reviewed by members with those adults.

Community “Voice” - The community has taken on a larger role as the program develops. To write the recent grant application most of the stakeholders met with program staff and AmeriCorps members to review the vision, goals, and potential for expanding the program, locally. The community partners are invited to an annual recognition ceremony, AmeriCorps graduation, and participate in program evaluation. There appears to be genuine enthusiasm for the “spirit of service” among community sponsors. The community partners interviewed for this research project, however, did not see how the program could continue without AmeriCorps’s support

Cross-Cultural Understanding - The ESLC program serves several distinct geographic regions and socio-economic populations. Service day events bring together the diverse parts of the county to work collaboratively on projects. These events have been very popular with youth and AmeriCorps members. Outreach to under-served communities includes coordinating with adjudicated youth and alternative-school youth to enhance their educational programming through field trips and school garden projects. Native American culture and world-beat music have added cultural flavor to special events hosted by the program.

Civic Stewardship - Youth make connections to the land and to their local community through long-term projects. Stewardship is difficult to measure, but next to impossible to develop through sporadic hit and run projects. Thus, the native plant and school garden projects coordinated through ESLC with youth ecology clubs, during after-school and weekend projects, help kids to understand their role in the community by encouraging them to form a relationship with a “special place.”

Sustainability Planning - Sustainability is a big issue with ESLC. Without the support of AmeriCorps members and resources provided through the AmeriCorps grant, the program would not be able to continue next year. With one additional year of Corporation funding partnerships will be able to maintain their outreach into the community, in the short-run, through their partnerships with community-based organizations. Beyond next year, if future national service funding is cut or reduced, the program will probably be scaled back. A YMCA environmental service-learning program launched last year, would probably not survive without AmeriCorps.

Looking Ahead

The rapidly expanding regional population will continue to put pressure on the local schools and youth service organizations to meet local environmental and youth development needs in ESLC’s service region. Additionally, the service corps has a mission which includes education of their members, but not envi-

ronmental education, service-learning or educational reform of the public school system. Somehow the educational goals of the program and the service mission of the corps need to be brought into alignment.

Options the Program is Considering

In discussions with community partners, the project coordinator, AmeriCorps members, and the service corps's regional director, several options for sustaining the program were mentioned. To be more sustainable, the partnership may be less involved in coordination and more involved in capacity building. An AmeriCorps*VISTA member could help build program capacity and sustainability by assisting the program with grant writing, volunteer recruitment, and training.

Without the traditional schools as strong partners who can articulate a shared vision for sustaining the program, these schools are probably not where the ESLC will be focusing their energy. Alternative schools, however, have shown an interest and financial commitment to the program. This new partnership may signal a shift in priorities toward social equity and environmental justice issues through youth leadership development and enrichment activities. By reaching traditionally under-served populations, and youth during out-of-school and alternative school settings, the ESLC program can build on its good start and create a truly organic, environmental-service learning program.

GROWING LOCAL LEADERS: A CASE STUDY FROM A DIVERSE NEIGHBORHOOD AND HIGHER EDUCATION

Environmental Service-Learning through Community Development

The Growing Local Leaders program is a subset of a university-based service-learning collaborative with an emphasis on community development and bringing university students and community members together in meaningful, mutual beneficial service activities. Environment has a broad interpretation with the Local Leaders program, and includes neighborhood beautification, school-based landscaping projects, and some limited coordination with a local nature preserve. One exciting phenomenon is the parallel process of service-learning at the university level with students—as well as—on the community level with middle school students. The neighborhood surrounding the university is incredibly diverse; more than thirty languages are spoken by the families of students from the local middle school. The middle school also houses a local community-based organization which serves as a liaison between the university, school, and community.

History of the Partnership

The partnership originated through the university. The university hired a service-learning director; the same director is still with the program today. Many of the connections are based on the solid relationships and trust built over the years by the service-learning director. The university has had a Learn and Serve Higher Education grant, and a part-time AmeriCorps service option for students. Several of the partnerships coordinated through Local Leaders program, now employ former university students introduced to service as a career through their service-learning experiences. The service-learning director mentioned that they are no longer operating with Corporation for National Service funding, however, service-learning seems to be institutionalized into the university curriculum with the exception of only a few departments—science and environmental studies are among the holdouts.

Purpose/Vision

Growing Local Leaders is committed to developing and supporting a diverse community of youth leaders through service-learning. Service-learning is used as an educational strategy with non-traditional learners and to encourage cooperation and leadership development among participants. K-12 Student participation in the program is optional, and occurs both during and after school.

Program Design

The environmental service-learning component is not separate from other service-learning activities conducted through the partnership. Middle school students select their projects based on their perception of community needs. The student-led projects are facilitated with the support of the nonprofit director and another staff member. The director is a former student from the university's service-learning program. Local Leaders were seen by community partners as very competent and dependable; each project the university service-learning director described had an important link to the Leaders. Partners meet regularly to plan and celebrate their projects. Local Leaders are trained and encouraged to facilitate meetings, lead reflection activities, assess community needs and develop projects based on those identified needs

Role of National Service

The partnership places university students, part-time AmeriCorps members, with a variety of service sites including an alternative high school in the immediate neighborhood. The Learn and Serve Higher Education grant has built capacity for service-learning at the university, currently operating with three staff members. The roles and responsibilities of university staff, AmeriCorps members, Local Leaders, school and nonprofit staff appeared to be clear. The transitions in and out seemed to occur mostly with AmeriCorps members. Yet some AmeriCorps service-learning participants moved into service careers in the local community, thereby "sustaining" their commitment long-term.

Challenges and Successes

There was a climate of trust and friendship among the participants and an appreciation for the relationships that have developed as a result of the partnership. The university staff are committed to helping AmeriCorps members fit their service hours into the less flexible university schedule, while assuring that the student's responsibilities to their service site are met. The site visit, conducted at the end of the fall term, was interrupted several times with students frantically seeking to meet their commitments, routed into projects needing an extra pair of hands. Two AmeriCorps members assisted alternative high school students with a school beautification project, then rushed off to study for finals. Obviously, meeting academic needs and community needs, at the end of the school term, is a university challenge.

Another challenge the partnership mentioned was the reluctance of some university professors to embrace service-learning as an instructional strategy. One example was with the environmental science department. A former professor was very enthusiastic and involved in having his students participate in service-

learning projects, however, when he left the department his enthusiasm didn't transfer to his replacement. A barrier seems to exist around reconciling the need for "hard science" applications to the curriculum and creating a service-learning project that meets community needs.

Promising Practices:

Youth Leadership - A local alternative high school, the site of a recent service project, would typically include middle school leaders in their activities. Although the middle school leaders were not present during the site visit, the school principal, the school librarian, two AmeriCorps members, and several high school and university students attended a collaboration meeting.

Community "Voice" - There was a substantial involvement with the community demonstrated during the site visit. Frequent communications were apparent and a sense of mutual regard was sensed by the researcher. There was sensitivity to the abundance of commitments each partner was faced with as schools were getting ready for winter break. The calendar of projects, collaboration meetings, and recognition events all indicated that partners' sense of community includes both the neighborhood and the university.

Cross-Cultural Understanding - During the site visit, staff members described a student coordinated photography exhibit that showcased the extraordinary talent and diverse cultures of the local neighborhood. The service-learning director commented, "...we do the cultural competency piece very well!"

Civic Stewardship - The environment and neighborhood provide Local Leader participants with opportunities to take pride in their community. Leaders have engaged in service-learning projects that improve their neighborhood, and transform physical areas that formerly were unkempt or neglected into attractive and useful community assets.

Sustainability Planning - Although no longer receiving funding through Learn and Serve, the service-learning director at the university felt that the program is fundamentally secure. The university's president is committed to supporting service-learning as an educational strategy.

Looking Ahead

Through institutionalization of service-learning into the university curriculum, although not all departments, the program will most likely continue. Growing Local Leaders, as a partnership may be less secure. There was some discussion about how to get more alternative high school students involved in service-learning. The students present recommended, "...offer them a chance to get out of class...that will get them interested!"

The university may want to consider planning now for the recruitment and the transfer of knowledge to a new program director, as the retirement of the current service-learning director may drastically impact the partnership.

Options the Program Might Want to Consider

A starting point for recruiting more participation from the environmental science department would be to offer a workshop or targeted professional development to entice reluctant teaching staff. "Acting Locally: Concepts and Models for Service-Learning in Environmental Studies" edited by Harold Ward from Brown University describes higher education programs that develop internships or "students as consultants" options for upper-division university students, thereby expanding the definition of service-learning. A combination of strategies is bound to find an entry point in the university's science departments.

The service-learning director at the university is clearly the "glue" that holds the partnership together. By beginning to delegate more responsibility to colleagues and community partners, the service-learning director could help ensure the sustainability of the program by making the job responsibilities seem achievable to a new recruit.

NATURAL PARTNERS: A CASE STUDY OF COMMUNITY COLLABORATION

Environmental Service-Learning Through School Reform

The philosophy of the partnership is rooted in the concept of improving the K-12 curriculum through community partnerships that provide coordination, planning time, and professional development to support school-based, service-learning. Recognizing the need to enhance status of teaching and service-learning in the larger context of school reform, Natural Partners for Service grew out of the environmental education department of a local graduate school. Graduate students help coordinate the program and build community partnerships, while conducting research and meeting their academic goals. They help teachers integrate environmental service-learning with curriculum standards. Thus, service-learning is a parallel process for both graduate students and K-12 students in the partnership. The community participates as equal partners in the program.

History of the Partnership

The partnership began as an informal network to support service-learning activities at an outdoor classroom. The outdoor classroom was the focal point for many of the early projects conducted through the program. As the program expands, additional sites and partnerships are being established. The town's former mayor is a "professional volunteer" with the program. The city government, local schools, and the university have developed a plan to fund a local urban parks education coordinator to help sustain the program.

Purpose/Vision

The goal of the partnership is for students to be invested in their community through "real life engagement," according to the site's program director. The vision goes beyond the outdoor classroom into the community, to help make kids feel a part of their community by participating in decision-making now and in the future. It provides for them "a concept of home place," adds the program director who is contemplating a teaching career. Another palpable part of the vision is the acknowledgment by community partners of youth as community resources—and, graduate students as the catalysts for positive change—by supporting teachers and developing student leaders.

Program Design

The design of the program is a bit complex. The major partners include the graduate school, local K-12 schools, the city government, a community-based nonprofit, and an outdoor conservation center. The graduate school provides a program director and students to coordinate site activities at the outdoor class-

room and to link community partners with schools and teachers. The conservation center has an AmeriCorps program and the graduate school has a Learn and Serve America grant.

Role of National Service

The coordination provided by AmeriCorps was not extensive. The Learn and Serve funding, however, was more significant to the success of the program. They expect future Learn and Serve funding to be reduced, but they are working with their state office to identify other sources of funding.

Challenges and Successes

Students design projects and make proposals to a local committee of stakeholders. The proposals are usually approved with few or minor changes. Students decide which groups they want to make presentations to. One high school student interviewed for this research reported, "...we have had positive encouragement...I've talked to a lot of people and realized that we are equal with adults...both in meetings and on the street."

One challenge the partnership may experience as the program grows, is how to provide support for additional teachers as they begin to show interest in environmental service-learning. It was not clear that the graduate school has the capacity to continue providing support at the current level. Even with the addition of a urban parks education coordinator teachers will need to become more self-sufficient practitioners of service-learning in the future, and roles and responsibilities may have to be revisited.

Promising Practices:

Youth Leadership - The program director and a teachers interviewed for this research both commented on students that do not typically flourish in the classroom, but respond quite differently when given the opportunity to learn and serve outdoors. These are the same kids who bring their parents to the site to show off their accomplishments. The program encouraged K-12 students to develop projects and make proposals to their peers and adults.

Community "Voice" -The program has developed a committee of stakeholders that meets regularly to discuss issues like sustainability and to approve and give feedback to student proposals. The committee representatives include students, the former mayor, city government officials, parks department staff, graduate students, school principals, teachers, and graduate students. Student projects are reviewed and evaluated by the stakeholder committee. There is also active community participation through a complimentary nonprofit conserva-

tion group, active at the outdoor site.

Cross-Cultural Understanding - In response to the interview questions, the cultural issues of this partnership include the socio-economic elements of the community and the Native American heritage. There is not a strong focus on integrating cross-cultural connections into the environmental aspects of the curriculum.

Civic Stewardship - There are some indications that students feel a sense of responsibility not only for their projects, but the community as well. By bringing their parents to see the results of their service-learning projects, the students demonstrate a pride in their accomplishments—connect their service to the community—and, have a chance to thrive outside the traditional classroom walls.

Sustainability Planning - A planning group from the university, city, and schools, meets regularly to discuss sustainability strategies. A plan to fund and hire an urban parks education coordinator was the direct result of this planning process. The locally funded position will be a big step toward sustaining the program, and serve as a match for leveraging further foundation funding.

Looking Ahead

Most communities do not have a graduate school, let alone one that embraces service-learning plus a community and school district all on the same wavelength. Nonetheless, pieces of the model are replicable. The tools and research developed at this site may serve to facilitate important parts of the process, elsewhere. Undoubtedly, the research generated by this program could help shape future environmental service-learning partnerships—from activities and training—to program design and institutionalization—within the context of school reform.

Options the Program is Considering

The partnership has developed a proposal for funding after-school programs as an extension of the school-based program. Also, more non-governmental resources are being tapped into. Since partners clearly recognize the program benefits there is a sense of shared responsibility for developing and sustaining the program.

DISCUSSION

Sustaining Environmental Service-Learning in Corps-Based Programs

At first glance, the subjects of the first two case studies appear to be like apples and apples, similar in that they identify the environment for some or most of their service-learning activities. Like apples and oranges, however, each approach the practice and sustainability of service-learning differently. Both Science Stewards and ESLC are corps-based programs—partnering with AmeriCorps and regional service corps programs. Science Stewards engages students during school time at an established site; ESLC focuses on projects with youth in multiple settings during out-of-school time.

Science Stewards has institutionalized the program into the high school's curriculum. ESLC looks to local community-based organizations for building capacity to serve schools and youth development programs for the long-haul, with no expectation of schools committing to service-learning independent from the community-based organization's support.

Another challenge they share is working with their service corps sponsors to expand the corps's capacity to extend educational support to the local community. The corps's administrative capacity—and the ability to payroll AmeriCorps members—may not justify a partnership with schools. School-based programs may not be a good fit for the service corps sponsorship unless the corps embraces school-based service-learning and educational reform as part of their organizational mission. Less structured educational settings and youth programs during out-of-school time are better suited for what most service corps do best, hands-on projects. Exceptions to this may be when the school district extends an invitation to the service corps with a clear vision of what they will accomplish together.

Sustaining Environmental Service-Learning in University-Based Programs

Both of the university-based partnerships profiled in the third and fourth case studies are making strides toward sustaining their programs. Unlike the first two case studies, neither program is wrapped up in coordinating the administration of an AmeriCorps grant. Trying to juggle member development, reporting, and record-keeping may be a barrier for sustaining some AmeriCorps environmental service-learning programs. Partnering with an existing AmeriCorps program may be one formula for success. Coordination of community partnerships is not conducted primarily by AmeriCorps members in either program. Terry Pickeral, project director of Compact for Learning and Serving offered this anecdote, "If an environmental service-learning partnership was a road trip, the ideal role for a member is not the driver, but the ramp that launches

the vehicle on its journey”.

Growing Local Leaders and Natural Partners for Service have each been recipients of Learn and Serve America grants. Neither program is counting on these funds long-term. Natural Partners has connected to both service-learning and environmental education networks and has a good grasp of the role of service-learning in school reform. Local Leaders depends on community-based organizations to strengthen and sustain the university and community relationships. Each of these programs appear to be moving forward with few federal dollars.

Supporting the Five Promising Practices of Environmental Service-Learning

The five promising practices, suggested by this research need to be considered by each environmental service-learning partnership, and supported across streams of service by the Corporation for National Service. Achieving a level of competency and a balance in all these areas of practice is critical—not only to building high-quality programs—but to keep them going past the life-cycle of their initial grants.

A good place to begin is with research developed by National Service Fellows, Deborah Leta Habib, Michael Kramer, Sandra Naughton, Bernadette Chi, and Elizabeth Swanson. Their recent projects all focus on different aspects of service-learning that relate to the promising practices for environmental service-learning. Sandra Naughton’s study looked at community-based service learning during out-of-school time; Elizabeth Swanson’s research focused on service-learning requirements; Michael Kramer examined institutionalization as a sustainability strategy for service-learning; Bernadette Chi’s work investigated civic education and citizenship in school-based service learning; and, Deborah Leta Habib explored social justice and multicultural, service-learning.

The National Service-Learning Clearinghouse has resources available online for each of the promising practices proposed by this study. Several nonprofit organizations and national youth service organizations—such as YMCA’s Youth Earth Service Corps—have developed resources for environmental service-learning (Appendix C.)

Whether programs realize it or not, by engaging in long-term partnerships, they are creating brand new organizations. These fledgling partnerships will cycle through all the stages of organization development. Some will be successful and leave the nest to become true collaborations. Getting help from local agencies that support nonprofits and board development is another alternative to the training and technical assistance provided through the Corporation.



CONCLUSIONS

"If you accept the idea that service can and should be at the heart of environmental protection, then you should also accept the notion that the environment must be at the heart of service"

— Brian Trelstad,
Former Director,
Center for National Service and the Environment



SUMMARY OF RESULTS

Characteristics or promising practices that were found to be common to high-quality, environmental service-learning programs include: (1) encourages youth leadership and decision-making; (2) integrates and values the community voice; (3) fosters civic stewardship; (4) provides opportunities for cross-cultural connections; and, (5) plans for the long-term sustainability of the program.

Of the five suggested promising practices, youth leadership and decision-making opportunities, cultural understanding, and planning for program sustainability, were not as deeply imbedded into the core of environmental service-learning partnerships as integrating and valuing the community "voice" or fostering civic stewardship. The following sustainability strategies were identified from the study:

- 1) Integration with curriculum standards, or organizational mission;
- 2) Increasing organizational capacity through staff development, paid positions, planning time, equipment and materials, and training and support;
- 3) Developing a coordinated network of community resources and committed partners;
- 4) A broad-base of funding, including local sources, and self-supporting projects.
- 5) Clarifying roles, responsibilities, and expectations among partners to develop a partnership that is equitable and in alignment with its purpose.
- 6) Adequate planning time for community partnerships to develop proposals and longer funding cycles to support the development of true collaboration.

Environment as an integrating context for service-learning has the potential to draw schools and youth service organizations into long-term partnerships with the community. These programs appear to enhance access to science learning and civic stewardship for youth through projects in their home place. Environmental service-learning engages non-traditional learners and at-risk students through

hands-on activities. Visible, high-profile community projects with environment-based partners may also draw the interest and participation of parents and families more so than other service-learning projects.

Environmental service-learning partnerships are less successful with offering all students leadership opportunities and weaving cultural understanding into the content of their programs. The biggest challenge for high-quality, environmental service-learning partnerships in the national service network is program sustainability. Those programs coping well with this issue are employing multiple sustainability strategies and are not concurrently administering an AmeriCorps grant.

DIRECTIONS FOR FUTURE RESEARCH

Future research for the field of environmental service-learning must be directed at the role of community-based organizations in supporting and sustaining high-quality programs. Since many community-based organizations are excluded from receiving support through state and national educational initiatives, validating their role and increasing their access to funding may be critical to designing, building, and sustaining environmental service-learning partnerships.

More information on the role of environmental service-learning in connecting people to their home place and how it engages non-traditional learners and promotes cultural understanding is called for. Looking toward the spiritual foundation of indigenous service-learning and how these programs provide guidance and inspiration to the field is a missing piece of the research. There is also a need to study how social equity and environmental justice, as components of environmental service-learning programming, may benefit and include lower-income populations.

EVALUATION

Some narrowing of the topic might have yielded more valuable insights into specific issues of environmental service-learning, rather than this broad overview. Following an assumption that most high-quality service-learning was school-based, the survey design included language that was not entirely applicable to community-based service-learning—or service-learning during out-of school time. The follow-up interviews helped to clarify the role of community-based organizations in environmental service-learning partnerships. It appears, however, that there is some degree of confusion in the field about what the difference is between school-based and community-based programs.

Access and scheduling with programs was an issue. Site visits were scheduled sub-

ject to program staff availability and the program's calendar of events. One site proved to be too challenging to complete data collection, so another similar site was substituted as a case study. One series of case study interviews was conducted by a graduate student, as logistics and funding did not allow for an actual site visit to one higher-education partnership. To assure a seamless, consistent application of the instruments a significant amount of coordination and cooperation transpired.

RECOMMENDATIONS

It should be noted that no previous study has examined environmental service-learning programs nationwide or in the national service network. No cross-stream database exists and, although that was not one of the objectives of this research, it would be very simple to organize. Environmental service-learning is not vastly different from other forms of service-learning, except that practitioners are not always approaching service-learning from a school reform context. Thus, environmental partners in service-learning programs may struggle with integrating service-learning into their organizational mission. By looking at community-based organizations, tribal organizations, universities, and service corps and their potential to partner with youth in environmental service-learning in school or during out-of-school time, a very big net has been cast. Surprisingly, there are many "species" of environmental service-learning in the national service "net". The most prevalent are those partnering with AmeriCorps and Learn and Serve America. The following suggestions and recommendations pertain to increasing support for environmental service-learning.

For Environmental Service-Learning Practitioners

It would be unwise for environmental service-learning partnerships to put all the sustainability "eggs" in a school basket. To develop high-quality, sustainable environmental service-learning partnerships, no community can afford to overlook the role of community-based organizations in coordinating youth service opportunities during school, or out-of-school time. Clifton, et al. (1998) emphasized the importance of community partners in locating resources that educators may not otherwise have access to. Thus, working with national organizations to increase recognition, support and funding for community-based organizations is critical. After-school initiatives cannot afford to exclude community-based service-learning and community-based organizations from funding if these initiatives are serious about meeting community needs, sustainably.

For the Corporation for National Service

The Corporation for National Service would get a lot of mileage from completion of a cross-stream database for the environmental service-learning programs it funds. Practitioners would then have access to their counterparts to start their own web-based support network, with some initial coordination provided by the Corporation. These self-facilitated, online networks would likely develop into regional affinity groups or “clusters” to address local environmental issues and coordinate environment-based projects.

Another project the Corporation would be wise to consider, is developing a handbook or guide to environmental service-learning for AmeriCorps and AmeriCorps*VISTA members. This document could also serve as a journal/reflection activity for national service participants, include some planning tools, and an evaluation component. The design and production of the publication could be a collaborative effort of several national partners—such as YMCA’s Youth Earth Service Corps or EarthForce—and national service participants or alumni—with some guidance from higher education, perhaps through Antioch New England Graduate School.

The Corporation must allow adequate planning time for community partnerships to develop proposals that reflect promising practices and program designs based on successful models and strong partnerships. Finally, there is an urgent call for sustainability planning, and longer funding cycles for partnerships that show promise, to support the development of true collaboration.

For Youth as Community and Environmental Leaders

Youth are passionate about protecting their environment. Adults must overcome fears of empowering youth and support this noble mission if we want to live in healthy communities.

Far more potential is available to communities and the environment through youth leadership and decision-making, in partnership activities, than is currently allowed. By simply providing youth with more high-quality service experiences—and opportunities to lead in the local environment—we may discover that youth and environment are not only a natural fit, but the most valuable resource that is currently untapped in our communities.



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APPENDIX A: PARTNERSHIP PLANNING FRAMEWORK

Each Case Study was applied to this framework. It may be used as a planning tool for community service-learning partnerships, in the local environment, or in other service learning settings. The intention is to provide a simple way to communicate with partners or potential participants about the program. Please feel free to adapt it to meet your program's needs or characteristics.

PARTNERS	STARTING	GROWING	SUSTAINING
Youth/Students Teachers Administrators District Executive Directors Parents/Families	<ul style="list-style-type: none"> How do we begin learning and serving with youth? What projects are needed in our local environment and/or neighborhood? 	<ul style="list-style-type: none"> Are students/youth involved in project selection, decision-making & evaluation? Is there support for: training, planning, & transportation? 	<ul style="list-style-type: none"> Are students/youth taking on more project leadership? Are administrators, program directors and districts committed to sustaining the project?
Coordinator/Mentor Learn & Serve AmeriCorps AC VISTA Pre-service teacher Staff position Student intern	<ul style="list-style-type: none"> How do we identify and fund a coordinator or mentor? Do we provide our coordinator/mentor with adequate training & support? Are expectations clear? 	<ul style="list-style-type: none"> Has the coordinator or mentor helped us build community partnerships? Are there good systems for decision-making? Is the information shared and organized into a record-keeping system? 	<ul style="list-style-type: none"> Are we prepared to recruit, support & train a new coordinator/mentor? Is the information transfer complete to a new coordinator/mentor? Is this role sustained by a paid staff position?
Community Business Nonprofit College/University Local Government Foundations Industry Service Clubs	<ul style="list-style-type: none"> Who in our community benefits from our projects? How do we make connections with community partners? What assets and relationships can we build on to engage community partners? 	<ul style="list-style-type: none"> Is the community "voice" a part of the decision-making process? Is there a good system for communications? Do community partners evaluate our projects? Are we celebrating and recognizing our partners? 	<ul style="list-style-type: none"> Is the community an equal partner in the project? Are youth/students seen as "assets" and community leaders? Are community resources available to help sustain the project?
Environment Museums & Parks Government. Agencies Organizations Gardens & Landscape Recycling Agriculture Neighborhoods	<ul style="list-style-type: none"> How do we identify needed projects that are easy to get to? Who can help us learn about the environment & build new skills? What do we need to know about each other to work together 	well? • Is there good follow-up with partners and donors after our projects? <ul style="list-style-type: none"> Are youth/students seen as capable and reliable stewards? Do environment-based partners help us to evaluate our project? 	<ul style="list-style-type: none"> Are our local environment-based partnerships part of a formal agreement or memorandum? Are we prepared to seek grant funding or local resources to help sustain the project?

Promising Practices of Environmental Service-Learning Partnerships

- Encourages youth leadership development
- Values and integrates the "community voice"
- Fosters stewardship of community/environment
- Develops strategies for program sustainability
- Provides opportunities for cross-cultural understanding



CASE STUDY — SCIENCE STEWARDS PROGRAM

PARTNERS	STARTING	GROWING	SUSTAINING
Youth/Students Teachers ✓ Administrators ✓ District ✓ Executive Directors ✓ Parents/Families	<ul style="list-style-type: none"> a few teachers were using service-learning & a science magnet school water-quality program was launched because restoration was not permitted, locally 	<ul style="list-style-type: none"> students identify their learning needs & participate in evaluation training, planning, & transportation provided by school, nature center, AC program & grants 	<ul style="list-style-type: none"> students lead activities and facilitate cross-age water-quality monitoring school administrators, nature center & water district, staff are all committed to the project
Coordinator/Mentor Learn & Serve AmeriCorps ✓ AC VISTA Pre-service teacher Staff position ✓ Student intern	<ul style="list-style-type: none"> mentor role is shared by 2 AmeriCorps members AmeriCorps program provided training school pays cash match expectations may need to be revisited 	<ul style="list-style-type: none"> the mentors helped build partnerships with a nature center, the water district, and local industry decision-making is informal, on-site after the bus, and between classes...no formal committee process 	<ul style="list-style-type: none"> school s-l coordinator is a paid position, however, not solely focused on Science Stewards information transfer to a new coordinator through portfolios and second-term AmeriCorps member's input
Community Business ✓ Nonprofit ✓ College/University Local Government ✓ Foundations Industry Service Clubs	<ul style="list-style-type: none"> the water district, the nature center and the school all benefit from enhanced curriculum and water-quality data nature center connection was made at a workshop, then followed up on by AC member partners all agreed on science education and s-l strategies as a good fit 	<ul style="list-style-type: none"> partners have input—especially the nature center. Water agency provides equipment and permit, not a lot of input project communications are informal/bilingual—students are matched to enhance understanding community partners give feedback and contribute to evaluation 	<ul style="list-style-type: none"> community partners have varying degrees of input and influence; students have had the opportunity to be seen as “assets” through projects community resources will be relied upon to sustain the program—no AmeriCorps support for the program next year...
Environment Museums & Parks ✓ Government. Agencies Organizations ✓ Gardens & Landscape Recycling Agriculture Neighborhoods	<ul style="list-style-type: none"> the water district provided a needed project with easy access nature center, AmeriCorps and water agency are training resources partners appear to find ways to work together 	<ul style="list-style-type: none"> nature center staff & AC members worked out science curricula issues youth have stewardship opportunities, less significant role in program leadership nature center helps with evaluation; formal AC evaluation 	<ul style="list-style-type: none"> the partnership has a permit from the water agency to access the site the facilitative role of AC members will be difficult to replicate local resources, new grants, and partners needed for expansion

Promising Practices of Environmental Service-Learning Partnerships

- Encourages youth leadership development ✓
- Values and integrates the “community voice” ✓
- Fosters stewardship of community/environment ✓
- Develops strategies for program sustainability
- Provides opportunities for cross-cultural understanding ✓



ESLC CASE STUDY — AN “ORGANIC” PROGRAM MODEL

PARTNERS	STARTING	GROWING	SUSTAINING
Youth/Students ✓ Teachers ✓ Administrators District Executive Directors ✓ Parents/Families	<ul style="list-style-type: none"> • service corps staff had experience with environment-based AmeriCorps programs • service corps became a regional partner in a statewide program 	<ul style="list-style-type: none"> • youth appear to be encouraged to take leadership roles • support for training, planning & transportation have come from the grant and host organization 	<ul style="list-style-type: none"> • youth have some limited opportunities to participate in project leadership? • Administrators/directors have not yet committed to sustaining the project
Coordinator/Mentor Learn & Serve AmeriCorps ✓ AC VISTA Pre-service teacher Staff position ✓ Student intern	<ul style="list-style-type: none"> • lots of turnover—a new staff coordinator each year of the program • training was provided at a statewide training • expectations, roles and responsibilities not always communicated 	<ul style="list-style-type: none"> • project coordinator has a significant role in building partnerships? • decision-making appears to be at the upper levels of the host organization • Information is kept in a well-organized system 	<ul style="list-style-type: none"> • recruited and trained a new project coordinator annually • there does not appear to be a formal information transfer process with staff • a paid staff position is supported by the grant
Community Business Nonprofit ✓ College/University Local Government Foundations Industry Service Clubs	<ul style="list-style-type: none"> • partnerships from many community organizations were formed • AmeriCorps members helped to coordinate the partnerships • the service corps had the transportation, equipment and organizational systems to payroll 	<ul style="list-style-type: none"> • the community has a limited role in the decision-making process • communication systems among partners are better than from headquarters to staff & partners • community partners participate in evaluation • celebration/recognition occurs at least annually 	<ul style="list-style-type: none"> • the community does not have equal status in the project • youth are seen as having the potential to be future community leaders • community resources are available to help sustain the project, but not without the resources of the host agency
Environment Museums & Parks ✓ Government Agencies ✓ Organizations Gardens & Landscape ✓ Recycling ✓ Agriculture ✓ Neighborhoods	<ul style="list-style-type: none"> • projects were developed in coordination with local partners • partners provide many additional training and service opportunities • relationships need to be rebuilt with staff turnover 	<ul style="list-style-type: none"> • follow-up with partners appears to be good • youth participants are encouraged to develop a sense of stewardship • partners help evaluate the projects and participate in planning 	<ul style="list-style-type: none"> • a majority of local environment-based partners signed on to formal memorandum • partners will need to seek grant funding and local resources or develop a new proposal for national service funding

Promising Practices of Environmental Service-Learning Partnerships

- Encourages youth leadership development ✓
- Values and integrates the “community voice” ✓
- Fosters stewardship of community/environment ✓
- Develops strategies for program sustainability
- Provides opportunities for cross-cultural understanding ✓



GROWING LOCAL LEADERS — A UNIVERSITY PARTNERS WITH DIVERSE NEIGHBORS

PARTNERS	STARTING	GROWING	SUSTAINING
Youth/Students ✓ Teachers Administrators District ✓ Executive Directors ✓ Parents/Families ✓	<ul style="list-style-type: none"> the university initiated the service-learning program projects were developed in partnership with the community—the local neighborhood. 	<ul style="list-style-type: none"> middle and high school students are involved in decision-making & leadership several funding sources for transportation and supplies, some donated 	<ul style="list-style-type: none"> middle school participate more in project leadership administrators, program directors and districts seem to be committed to sustaining the project
Coordinator/Mentor Learn & Serve ✓ AmeriCorps ✓ AC VISTA Pre-service teacher Staff position ✓ Student intern	<ul style="list-style-type: none"> university recruited a coordinator/director to develop the program director found the training & support she needed, and stuck with it there appear to be clear expectations in the program 	<ul style="list-style-type: none"> the service-learning director has built many community partnerships regular collaboration meetings are held for planning/reflection information is shared and organized into a documentation system 	<ul style="list-style-type: none"> recruiting, supporting, & training a new director will be an issue for the program information transfer to a new director will take some preparation this role is sustained by a paid staff position
Community Business ✓ Nonprofit ✓ College/University ✓ Local Government Foundations Industry Service Clubs	<ul style="list-style-type: none"> community partners were identified through local non-profit agencies and schools connections were initiated by the university s-l director the bonds have developed through interpersonal connections 	<ul style="list-style-type: none"> community "voice" is critical to the program's decision-making process communications appear to be frequent, formal and informal community partners help evaluate projects celebration/recognition occurs frequently 	<ul style="list-style-type: none"> the community is treated as an equal partner youth/students are seen community leaders/assets some community resources appear available to help sustain the project partners are engaging in s-l as part of their organizational mission
Environment Museums & Parks Government Agencies Organizations Gardens & Landscape ✓ Recycling Agriculture Neighborhoods ✓	<ul style="list-style-type: none"> low-income area has many needs—local environment has needs skill development is supported through nonprofit agencies strong bonds of friendship and caring relationships evident in the partnership 	<ul style="list-style-type: none"> good follow-up with partners is provided by the service-learning director both K-12 and university students have stewardship opportunities environment-based partners currently not too involved in the project 	<ul style="list-style-type: none"> environment-based partners are not currently active in the program grant funding or local resources to help sustain the project should be available to the program a "marketing plan" for service-learning to the science dept. is needed

Promising Practices of Environmental Service-Learning Partnerships

- Encourages youth leadership development ✓
- Values and integrates the "community voice" ✓
- Fosters stewardship of community/environment ✓
- Develops strategies for program sustainability ✓
- Provides opportunities for cross-cultural understanding ✓



NATURAL PARTNERS FOR SERVICE — A COMMUNITY COLLABORATIVE

PARTNERS	STARTING	GROWING	SUSTAINING
Youth/Students ✓ Teachers ✓ Administrators ✓ District ✓ Executive Directors Parents/Families ✓	<ul style="list-style-type: none"> land was dedicated for an outdoor learning center students were encouraged to develop needed projects a nature trail was developed at the site 	<ul style="list-style-type: none"> students are involved in project selection, decision-making & evaluation planning, transportation & training through Learn and Serve & partners 	<ul style="list-style-type: none"> students have a significant amount of project leadership. administrators, program directors and districts have committed to sustaining the project
Coordinator/Mentor Learn & Serve ✓ AmeriCorps ✓ AC VISTA Pre-service teacher Staff position ✓ Student intern	<ul style="list-style-type: none"> site director was identified from the local grad school grad school and the state learn and serve office provided training expectations, roles and responsibilities of the site director appear to be clear 	<ul style="list-style-type: none"> partnerships are coordinated through the graduate school there are both formal and informal processes for decision-making information is shared among all partners and the public 	<ul style="list-style-type: none"> program recently recruited & trained a new coordinator/director information transfer to a new coordinator has had ongoing support from the former director role is sustained by a paid staff position
Community Business ✓ Nonprofit ✓ College/University ✓ Local Government ✓ Foundations Industry Service Clubs	<ul style="list-style-type: none"> program benefits students, their families, the city, the schools connections with community partners were facilitated by the site director and grad students the city, schools, and the grad school partners are working together 	<ul style="list-style-type: none"> community "voice" is integrated into the decision-making process there are systems for frequent communications partners evaluate projects and participate in research partners are celebrated and recognized regularly 	<ul style="list-style-type: none"> community seems to be an equal partner in the project students have the opportunity to be seen as "assets" and community leaders some community resources available to help sustain the project
Environment Museums & Parks ✓ Government Agencies ✓ Organizations ✓ Gardens & Landscape Recycling Agriculture Neighborhoods	<ul style="list-style-type: none"> K-12 students play an active role in identifying projects at the site AmeriCorps members and grad students help students to build new skills in the environment partnerships are based on providing support for schools/teachers 	<ul style="list-style-type: none"> good follow-up with partners and donors students are seen as capable and reliable stewards and are given a lot of support for their ideas and efforts environment-based partners help evaluate student projects 	<ul style="list-style-type: none"> environment-based partnerships part of a formal agreement for the outdoor classroom partnership is prepared to seek grant funding or local resources to help sustain the project site generates research and curricula

Promising Practices of Environmental Service-Learning Partnerships

- Encourages youth leadership development ✓
- Values and integrates the "community voice" ✓
- Fosters stewardship of community/environment ✓
- Develops strategies for program sustainability ✓
- Provides opportunities for cross-cultural understanding



APPENDIX B: FIELD DATA

ENVIRONMENTAL SERVICE-LEARNING SURVEY MATRIX (N=32)

Program	50-100% env. focus	env. s-l integrated curriculum	long-term projects	community as planners	youth leader- ship	local program support	planning for sustainability
Rural (N=16)	69%	81%	81%	93%	87%	100%	75%
Suburban (n=15)	67%	60%	73%	46%	46%	60%	40%
Urban (N=11)	82%	81%	100%	72%	72%	63%	54%
Primary Age (N=19)	68%	68%	68%	57%	36%	57%	52%
Middle School Age (N=20)	75%	75%	70%	70%	70%	70%	70%
High School Age (N=17)	76%	70%	70%	82%	64%	76%	82%
Small <100 (N=7)	42%	42%	57%	42%	42%	57%	42%
Medium >100 (N=7)	85%	71%	85%	71%	71%	85%	57%
Large > 500 (N=19)	68%	78%	68%	57%	57%	68%	63%
AmeriCorps (N=18)	78%	77%	77%	88%	72%	77%	77%
Learn & Serve (N=15)	73%	86%	80%	66%	73%	80%	60%
NoCNS \$ (N=5)	60%	60%	60%	40%	40%	40%	20%
Corps-based (N=9)	78%	66%	66%	66%	55%	44%	55%
College-based (N=4)	75%	75%	75%	50%	75%	100%	75%
Community- based (N=15)	80%	73%	93%	86%	73%	86%	73%
School-based (N=18)	83%	94%	94%	66%	72%	83%	61%

The above matrix shows how each individual influence may impact the quality and sustainability of environmental service-learning programs. Survey data indicated that programs with a primary school-age youth component and programs in suburban settings were less likely to have strong community involvement and support. Small programs (<100 youth participants) did not demonstrate strong indications for sustaining their programs long-term—yet, the sample size was small (N=7) with only 43% of the programs focused on the local environment. Small programs may represent single classrooms or a start-up program that is just “getting their feet wet.”

Factors that may contribute to improving program quality and sustainability include: (1) Corporation for National Service funding; (2) Rural community/environment settings; (3) Middle or high school age-component; (4) Administrative and coordination support from a community-based organization. Community-based organizations were particularly effective in the integration of community in program planning (86%) whereas school-based programs appeared to be less effective (66%). Although the sample size of university-based programs was small (N=4), 100% of the programs surveyed indicated local program support. Corps-based programs, again the small sample size should be noted (N=9) had significantly fewer examples of youth leadership (55%), local program support (44%) and long-range plans for sustaining the program (55%).

CHARACTERISTICS OF HIGH-QUALITY, ENVIRONMENTAL SERVICE-LEARNING PARTNERSHIPS (N-12)

Program Information	Small, Medium or Large	Rural, suburban or Urban	Primary, Middle or High School	CBO, University of School-Based	AmeriCorps or Learn & Serve	Other Features of the program
No Waste Clubs, Inc.	Medium	Urban	Primary and High School	CBO-Based	Learn & Serve	Youth driven
Youth Can Do Anything	Large	Urban	Middle School	CBO-Based	AmeriCorps	Out-of-school time
Urban Stewards	Large	Urban	Middle School	CBO/School-Based	AmeriCorps	Student driven
Corps Ecology Clubs	Small	Rural	all grades	University-Based	AmeriCorps	Hands-on & creative
Enviro-Club Alliance	Large	Urban & Suburban	High School	CBO/School-Based	AmeriCorps	Social Justice
Environmental Service Collaborative	Medium	Rural & Suburban	Middle and High School	CBO/School-	AmeriCorps	Dedicated AmeriCorps members
Science Stewards	Medium	Suburban	Primary and High School	CBO/School-Based	AmeriCorps	Science & Stewardship
Active in Learning	Large	Suburban	Middle School	CBO/School Based	Learn & Serve	Pre-service teaching
High Desert Adventures	Large	Rural	Middle and High School	CBO/School-Based	AmeriCorps & Learn & Serve	Senior Corps & Cross-cultural
Turtle Island Community School	Large	Rural	all grades	School-Based	AmeriCorps & Learn&Serve	Higher Ed—Culture & Spirituality
A Walk in the Woods	Large	Rural & Suburban	all grades & Alternative	CBO/School-Based	AmeriCorps & Learn&Serve	Learn& Serve Higher Ed & NCCC
Service in our Home Place	Large	Suburban	all grades	University & School-Based	AmeriCorps & Learn & Serve	Outdoor site & Research Laboratory

Note: The names of programs have been changed to protect confidentiality.

RESULTS OF PROGRAM DIRECTOR SURVEY

Background

A total of 100 surveys were mailed between Dec. 2nd and 28th, 1999. Approximately one half of the surveys were sent to AmeriCorps grantees, identified as meeting both environmental and educational needs, but not necessarily using a service-learning strategy with youth, K-12. Surveys were sent to Learn and Serve America grantees (N=42) identified through State Learn and Serve offices, and the remainder (N=6) were recommended through The Constitutional Rights Foundation, Robinson Mini Grant Program.

The survey was sent to program directors or service-learning coordinators, and although the winter holidays may have impacted the rate of participation, 41 surveys were completed and returned. Ten surveys were undelivered. Data were aggregated from 32 of the 41 returned surveys—the surveys, in order to be considered, had to meet three criteria: 1) The program has been operating for at least one year; 2) The program uses service learning as an educational strategy; and, 3) At least 25% to 50% of service activities of youth participants focus on the local environment

Aggregated Data

Total number of programs that met criteria:	32
Total number of students:	72,415
Total number of states represented:	20

Note: Some survey questions were left blank—and when possible—filled in during the follow-up interview. Program directors and service-learning coordinators frequently checked multiple answers when asked the following questions about their programs:

Location:

Rural =15	Urban =11	Suburban =15
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Student population is:

Primary =19	Middle =20	High School =17	Alternative =3
Other: college =3	preschool =1	after-school = 3	grad school=1

National service partners active in your program:

AmeriCorps =18 AmeriCorps VISTA =2 Learn and Serve America =15 N/A = 5
Senior Corps = 2 NCCC = 1 Learn and Serve Higher Ed. =2 FASL = 1

Does your program use a service-learning as a K-12 educational strategy?

Yes = 31 No = 2*

*In this project, but not consistently throughout the school; I think!; 9-12th grade;
7th grade...

Does your program use assessment to measure student learning?

Yes =29 No = 2

Estimate your program's focus on K-12 youth service in the local environment

(note: several respondents did not answer/understand this question)

100% - 75% =15 75% - 50% = 9 50% - 25% = 6

Program administration:

Corps-Based = 9 Local College or University = 4 Community-Based =15
School-Based =18

Are you seeking opportunities to share information with other programs?

Yes =27 No =4 Maybe =2

Indicate your program's preferred methods of networking:

Conferences = 15 Community Networks = 10 Newsletters =14
Listserv's = 9 Other: tribal council, workshops, Internet

Would you be willing to participate in a 20 minute follow-up interview?

Yes = 31 No = 1

OTHER RESPONSES FROM THE SURVEY:

Academic skills/subjects taught in the program:

Language Arts = 12 Social Studies = 9 Environment = 8 Science = 26
Math = 16 Reading & Writing = 14 History = 8 Civics/Service = 5
Cultural Issues = 5

How does your program cultivate youth leadership in K-12 youth participants?

Presentations/reporting = 5 Decision-making =8 Planning = 10
Responsibility/stewardship = 15 Teambuilding = 5 Teaching/tutoring = 8

The following responses are subjective, from the point of view of respondents (program directors/service-learning coordinators) and represent the researcher's interpretation.

Please give one example of a non-episodic, environmental service-learning activity:

Non-episodic (long-term) = 26 Episodic (short-term) = 4

Please give one example of student reflection related to a service-learning activity:

Response demonstrates an organized reflection activity = 17

Response demonstrates an activity other than organized reflection = 11

Please give one example of how community partners are involved in planning and implementation of the program:

Note: Community partners mentioned in respondent's replies:

Business = 4

Corporation for National Service = 5

Educational Institutions = 8

Conservation Groups = 8

Government Agencies = 6

Advisory Boards = 4

Community-Based Organizations = 17

Please give one example of how students are involved in program decision-making:

High level of involvement = 15 Medium level of Involvement = 13

Low level = 2

Please give an example of how youth are recognized for their service efforts:

Multiple ways/High recognition = 12 Some recognition/Yearly = 16

Newspaper only = 1

Note: The following responses were organized by category.

Which organizations have been most helpful to your program's development?

Corporation for National Service = 10

Educational Institutions = 7

Government Agencies = 14

Community-Based Organizations = 17

Tribal Organizations = 2

Conservation Groups = 14

Foundations = 4

Business = 2

Give one example of how your program is planning for long-term sustainability?

Grants/Fundraising = 14 Partnerships = 9 Books/Equipment/Curricula = 5

Training/Curriculum Integration/Institutionalization = 9

Service-Learning is supported in your program through:

Transportation costs = 15

Planning time for teachers = 8

Professional development = 21

Other = 8 (In-kind donation of books; support of curriculum specialists; we plan

and lead the service, the teachers lead the learning; AmeriCorps members assist teachers; teacher support person has been key!)

(Optional)

Did the survey seem relevant to your program?

Yes = 17 No = 0 Somewhat = 12

Was the format of the survey clear and user-friendly?

Yes = 20 No = 0 Somewhat = 8*

*3 respondents said there was not enough space for their answers.



APPENDIX B: INSTRUMENTS

Patty Madigan
National Service Fellow
P.O. Box 1697, Mendocino, CA 95460
(707)964-1087/pmad@mcn.org

November 29, 1999

Dear Colleague,

Your program was recommended to me as a “high-quality” environment-based, service-learning program. I am conducting research on environment-based service learning with the National Service Fellows Program, a Corporation for National Service sponsored project. It is my hope that through this survey, follow-up interviews and case studies—plus, focused time with projects in the field—I will identify resources and opportunities to build support for environment-based service learning partnerships, nationwide.

This survey was designed to be conducted with program directors. If that title that does not apply to your program, then please give this survey to the person responsible for coordinating your service-learning partnership. Whether you are an experienced practitioner, or seeking strategies to sustain your “good start”, your responses are invaluable to this project. All responses will be confidential. Please feel free to contact me should you have questions regarding the survey or the project. The interviews and case studies will be selected to reflect a demographically, and organizationally, diverse sample. I would be happy to share what I develop with respondents.

Just like you, I am working on a short timeline; my fellowship “reporting” is due Jan. 31, 2000. I value your time and assistance and can assure you that your contribution is deeply appreciated!

Sincerely,

Patty Madigan

Program Director Survey
Environment-based, Service-Learning Programs with a Youth Focus

Estimated time to complete this survey is 15 minutes.

This survey has been sent to you from National Service Fellow, Patty Madigan who is conducting research for the Corporation for National Service on environment-based programs using service-learning with youth, K-12. Your responses will be confidential. The survey will help assess the need, and opportunities for, resource sharing and to identify potential programs to be included as case studies in this project. Please complete this survey by Dec.24th, and mail it to: Patty Madigan,

PO Box 1697, Mendocino, CA 95460, or fax it to (707)964-7717. Or, request a survey via email : pmad@mcn.org If you have any questions or concerns, please contact Patty Madigan through the above contact information, or by calling: (707)964-0395. Thank you, for your time and assistance.

(Note: in order to save paper, the second page of the survey is on the back of this page)

Program Name: _____ **Number of students served:** _____
Location: Rural Urban Suburban **City:** _____ **State:** _____
Your Name: _____ **Title:** _____
Phone Number: _____ **E-mail address:** _____

In what month and year did your program start?

Student population is: Primary Middle Secondary
Other: _____

National service partners active in your program (please mark all that apply): N/A
AmeriCorps Senior Corps NCCC Learn & Serve L & S
Higher Ed.

Service Learning

1) Does your program use service-learning as an educational strategy? Yes No

2) Please identify a few of the academic skills taught through the program.

3) How does your program cultivate leadership in youth participants?

4) Does your program use assessment to measure student learning? Yes No

5) How much of your program focus is on service in the local environment? 100%-
75% 75%-50% 50%-25% less than 25%

6) Please give one example of a non-episodic, environment-based service learning activity (non-episodic, in this case, means long-term).

7) Please give one example of student reflection related to a service-learning activity.

Program Administration

1) Is your program corps-based? (a service corps, such as CCC) Yes No

2) Is your program based at a local college or university? Yes No

3) Is your program community-based? (a non-school, community organization) Yes No

4) Is your program school-based? (a school, district, or county office of ed.) Yes No

Collaboration

1) Please give an example of how community partners are involved in planning and implementation of the program.

2) Please give one example of how students are involved in program decision-making

3) Please give an example of how youth are recognized for their service efforts.

Sharing Best Practices and Resources

1) Are you seeking opportunities to share information with other programs? Yes No

2) If “yes” please indicate your program’s preferred methods of networking.

Conferences Community Networks Newsletters Listserv’s
Other

3) Would you be willing to participate in a 20 minute follow-up interview? Yes No

4) If “yes” what is the best day, time, and phone number to reach you ?

Sustainability

1) Which organizations have been particularly helpful to your program’s development?

2) Give one example of how your program is planning for long-term sustainability

8) service-learning support through (mark all that apply): transportation
planning time for teachers professional development for teachers

Optional:

Feedback and Evaluation to Researcher

1) Did the survey seem relevant to your program? Yes No Somewhat

2) Was the format of the survey clear and relatively user-friendly? Yes No

3) Is there something else you would like to say about your program or the field of environment-based service learning?

**Environmental Service-Learning Project
Program Director Interview Questions**

Program Name:

Date/Time Contacted:

Program Contact:

Title:

Phone:

Email:

Address:

Introduction

Hi! This is Patty Madigan. Thank you for responding to the Program Director Survey on environmental service learning. The purpose of this interview is to learn more about how environmental service learning partnerships are conducted, identify some best practices, and strategies for program sustainability. I am hoping to collect information—through survey instruments, interviews, site visits and collecting relevant resources—that will support, develop and sustain environmental service learning. In addition I will try to identify opportunities for programs to network more effectively.

Clarification

1) Is this a convenient time to talk? The interview will take about 40 minutes.

A. First, there are __things I would like you to clarify from your survey:

B. Do you want to ask me anything about the survey?

Why combine Environment and S-L?

2) How does your program interpret/define Environmental Service-Learning? Or, do you call it something else?

3) Why has your program taken a service learning approach to environmental education? What is the added value?

Partnerships - Best Practices

4) How does the program integrate the “community voice” in partnerships?

5) How does your program, in terms of structure and content, promote cross cultural understanding?

Sustainability

6) Has your program developed any strategies for long-term sustainability of the program?

7) What role have national service participants played in your program's development? How will you sustain the service currently provided by these participants?

8) Are there any written materials or environmental service learning resources that you would recommend to other programs?

Evaluation

9) Did these questions seem relevant to your program? Is there anything you wish to add?

Thank you for your time! Would you like to be on a mailing list for environmental service-learning?

The Environmental Service-Learning Project Youth/Community Partnerships

Youth Form:

This form was developed by National Service Fellow, Patty Madigan, to collect information regarding community/youth partnerships with a focus on service-learning in the local environment. The research will attempt to identify promising practices in environmental service-learning partnerships, strategies for sustaining programs, and methods for participants to share information from the field. Thank you for your participation and cooperation. All responses will be confidential.

1. How have you been encouraged to participate in this program?

2. How have you or your peers been encouraged to lead through this program?

3. What opportunities have you had through this program to learn about other cultures?

4. How has your participation in this program influenced how you feel about your local environment or neighborhood?

5. Do you think that this program will have a lasting impact on the local community?

6. What have you done, personally, as a result of this program that you feel makes a difference in the local environment, or neighborhood?

The Environmental Service-Learning Project Youth/Community Partnership Feedback

Coordinator Form:

This form was developed by National Service Fellow, Patty Madigan, to collect information regarding community/youth partnerships with a focus on service-learning in the local environment. The research will attempt to identify promising practices in environmental service-learning partnerships, strategies for sustaining programs, and methods for participants to share information from the field. Thank you for your participation and cooperation. All responses will be confidential.

1. How has this program encouraged the “youth voice” in project decision-making?

2. How has this program encouraged youth leadership?

3. Please describe any opportunities youth have had through this program to learn about different people or cultures?

4. What are some of the strategies for the long-term sustainability of this program?

5. In your opinion, what is the ideal role for a coordinator in this program?

6. Describe a partnership between youth and the local community, in the environment or neighborhood, that has developed as a result of this program.

The Environmental Service-Learning Project Youth/Community Partnership Feedback

Teacher Form:

This form was developed by National Service Fellow, Patty Madigan, to collect information regarding community/youth partnerships with a focus on service-learning in the local environment. The research will attempt to identify promising practices in environmental service-learning partnerships, strategies for sustaining programs, and methods for participants to share information from the field. Thank you for your participation and cooperation. All responses will be confidential.

1. How has this program encouraged the “youth voice” in project decision-making?

2. How has this program encouraged youth leadership?

3. Please describe any opportunities youth have had through this program to learn about different people or cultures?

4. What are some of the strategies for the long-term sustainability of this program?

5. In your opinion, what is the ideal role for a coordinator in this program?

6. Describe a partnership between youth and the local community, in the environment or neighborhood, that has developed as a result of this program.

The Environmental Service-Learning Project Youth/Community Partnership Feedback

Community Partner Form:

This form was developed by National Service Fellow, Patty Madigan, to collect information regarding community/youth partnerships with a focus on service-learning in the local environment. The research will attempt to identify promising practices in environmental service-learning, strategies for sustaining programs, and methods for participants to share information from the field. Thank you for your participation and cooperation. All responses will be confidential.

1. How has this program encouraged the “youth voice” in project decision-making?

2. How has this program encouraged youth leadership?

3. Please describe any opportunities youth have had through this program to learn about different people or cultures?

4. What are some of the strategies for the long-term sustainability of this program?

5. In your opinion, what is the ideal role for a coordinator in this program?

6. Describe a partnership between youth and the local community, in the environment or neighborhood, that has developed as a result of this program

BIBLIOGRAPHY OF ENVIRONMENTAL SERVICE-LEARNING AND RELATED RESOURCES

Breithaupt, David L. and Russell T. Ogguthorpe, 1994. "Making Science Relevant: Active Learning in Math and the Sciences," NSEE Quarterly, 20 (2), pp. 1, 24-25.

The authors build a case for using service learning as a teaching strategy for science and math. Science and math are often taught as isolated subjects, without application to the "real world" of students and their communities. They cite examples of service-learning projects, nationwide, that apply service learning to science and math as an alternative to traditional classroom teaching methods.

Brunk, Tami, 1998. "From Apathy to Action: Planting Trees and Seeds of Stewardship in Youth," Portland, OR, Northwest Regional Educational Laboratory.

A program profile and reflection of service experiences written by an Ameri-Corps member. This piece captures the transformational impacts on community members, including students, and the author.

Boston, Bruce O., 1997 *Service Learning: What it Offers to Students, Schools, and Communities*, a report from the council of chief State School Officers, The Close-Up Foundation, Earth Force and the National Society for Experiential Education, Washington, DC, Council of Chief State School Officials.

Community service through high school science. Rutherford High School in Panama City Florida transformed a wetlands, located on an Air Force base that had been cited for environmental violations, into a community educational resource and study site for water quality (biology and environmental science).

California Department of Education, 1999. *Service-Learning: Linking Classrooms and Communities*, Sacramento, Superintendent's Service-Learning Task Force.

An overview of Service-Learning in California's public schools. Includes Superintendent Delaine Easton's goals for implementing service-learning, linking to state accountability standards, and the recommendations of the Service-Learning Task Force. The text is augmented with photo and project "cameos" including some science and environment-based programs.

Clark, Denise, ed. 1994. *Learning through Service: Ideas From The Field*, San Mateo, Service Learning 2000 Center.

A collection of short profiles—including interdisciplinary environment-based, as well as, science-based, service learning projects, K-12. All programs are in California. Each profile includes one "best practice"—for example, ..."careful as-

assessment of community needs leads to more effective service," and, "Students improve research skills when they investigate real problems."

Clifton, Linda, Tammy Mauney and Rebekah Falkner, 1998. *Take A Class Outdoors: A Guidebook for Environmental Service Learning*, Clemson, SC, National Dropout Prevention Center, Clemson University.

This booklet looks at school-based, environmental service-learning. The authors, a student, a teacher, and a school principal, look at how to develop a project, curriculum integration, ideas and resources for implementation. There is a short section on community involvement.

Corporation for National Service, 1994. *Principles for High Quality National Service Programs*, Washington, DC

This document, an early Corporation publication, articulates principles to consider for addressing community and participant needs in the different sectors of national service. It establishes some criteria for looking at both environment and service-learning.

Corporation for National Service, 1997. "AmeriCorps and the Environment: Strategies from the Field" Draft document

This work attempts to identify best practices from AmeriCorps programs that focus on environmental service. Environmental Education, restoration, and public safety/service are all addressed. The volume includes a synthesis of "Footnotes from the Field" an periodic fax circular that was a product of the Center for National Service and the Environment.

Corporation for National Service, 1997. "National Service-Leadership Institute, Environmental Technical and Training Programs Evaluation Summary"

An evaluation of the goals and objectives of the Center for National Service and the Environment. The Center, which only operated for 18 months, was reviewed by an outside evaluator for the Corporation. It contains potential resources and contacts regarding what may have "framed" the initial conversations on national service partnerships between EE & S-L.

Cushing, Elizabeth and Erica Kohl, 1996. "Asset Mapping Resources Packet" Linking San Francisco Professional Collaboration Day, Allies For Education.

A compilation of asset-mapping resources that gives an alternative approach from traditional "needs-based" program design. Asset mapping could be looked at as a planning tool for sustainability. There are other asset-based community assessment resources out there—but, these apply specifically to service learning.

Ely, Eleanor, ed. 1999. "The Volunteer Monitor: Youth Projects", Portland, OR, The River Network, 11(2).

Biannual publication for citizen volunteer monitoring. This issue specifically examines youth-related, volunteer water quality testing and restoration projects. Although they don't use the term "service-learning" many of the projects resemble S-L practice.

Habib, Deborah Leta , et al, 1999. "Practicing Citizenship Behind Taco Bell: The Evolution of an Outdoor Learning Lab."

An article developed by National Service Fellow, Deborah Habib, and grad students from Antioch, New England. The paper discusses some of the obstacles and successes of conducting multi-grade EE/S-L and describes some of the qualitative results and outcomes on 5th, 7th, and high school students and their teachers. The paper provides a list of lessons learned from the research.

Hillman, Carol, 1994. "A Path to Rural Regeneration," NSEE Quarterly (Summer), National Society for Experiential Education, pp. 16-17, 26.

This article describes challenges faced by rural America in terms of sustainable communities. The economic viability of rural areas is threatened by the trend of service industry growth and phasing out of production (manufacturing, resource-based industries, small farms, etc.) The author contends that the economic future of rural areas lies in small business. Thus students need to learn: about work, how to problem solve, beyond rural community, the power of communication, across generations, about the environment, skills for the future. Hillman concludes that, "Service -learning is the logical extension of our rural spirit of neighbor helping neighbor."

Jester, John, 1997. "Searching for Success: Renewing America's Community Spirit through Environmental Success," In *Nature Study: A Journal of Environmental Education and Interpretation*. Homer, New York

An index of 1600 "environmental success stories" from an organization called "Renew America". An annual awards program singles out 20 exemplary programs, many of them youth-initiated, at their Environmental Leadership Conference in Washington, DC. The program emphasizes breaking down barriers and focusing on common interests, in collaborative, intergenerational, and even optimistic projects.

Jones, Douglas A., 1998. *Environmental Service-Learning*, Tree Trust, St. Louis Park, MN.

This crisp, attractive, practical guide to environmental-service learning looks at the rationale for combining service learning and environment, and also provides some insight for implementation, reflection and lists further resources to consider.

An introduction for classroom teachers, service-learning coordinators, resource agencies and environment education advocates.

Kendall, Jane C., 1990. *Combining Service and Learning: A Resource Book for Community and Public Service*, Volume 1, Raleigh, NC, National Society for Experiential Education.

The background of the national service movement is thoroughly addressed. It mentions the lessons learned and pitfalls of previous service initiatives, and eras of national service, and cautions contemporary “new wave” service programs to pay heed to this important information. The book lists principles of best practice in combining service and learning.

Kendall, Jane C., 1990. *Combining Service and Learning: A Resource Book for Community and Public Service*, Volume 11, Raleigh, NC, National Society for Experiential Education.

Besides addressing community partnerships and the role of advisory committees, this volume profiles programs—a veritable encyclopedia of service—including some good examples of environmental service-learning projects. Includes an article, co-written by a high school student, entitled, “Recycling with an Educational Purpose; A Fifth Grade Project” by Tom Gerth and David A. Wilson.

Kinsley, Carol W. and Kate McPherson, eds., 1995. *Enriching the Curriculum Through Service Learning*, Alexandria, VA, Association for Supervision and Curriculum Development.

A compendium of articles—some environmental service-learning programs—including an exemplary program in Bath, Maine. The director wrote a piece called, “Creating a School and Community Culture to Sustain Service Learning.” Other articles addressing EE/S-L include, “High School: Service Learning and a Caring School Community” and “Youth Corps Makes Middle School Connection.” Also interesting are the sections titled, “Service learning Honors Cultural Diversity” and “Standards of Quality for School-Based Service Learning.”

Kretzmann, John P. and John L. McKnight, 1997. *A Guide to Evaluating Asset-Based Community Development: Lessons, Challenges, and Opportunities*

By the authors of *Building Communities From the Inside Out*, the asset-mapping approach to community assessment and resource identification strategy “how-to.” This is a more sustainable way of building community capacity, and an alternative to just looking at “needs.”

Lieberman, Gerald A., and Linda L. Hoddy, 1998. *Closing the Achievement Gap: Using the Environment as an Integrating Context for Learning*, San Diego, CA: State Education Roundtable.

A cutting edge analysis of using the environment as an integrating framework for other curricular subjects. A compilation of interviews and case studies from 40 exemplary schools, nationwide. Note: one of the case studies involved a national service partner.

Maryland Student Service Alliance, 1995. *Maryland's Best Practices: An Improvement Guide for School-Based Service-Learning*, Baltimore, MD, Maryland State Department of Education.

Step-by-step guide to best practices for improving school-based, service-learning. The guide includes examples of real-life programs and projects—some environmental service-learning projects are included. A section on community partnerships—with “essential steps to build high-quality partnerships”—is useful to this research.

Miller, Jono, Julie Morris, and James Feeney, 1997. “Experiential Learning and the Problem of Place Attachment”, *NSEE Quarterly* (Fall), National Society for Experiential Education, pp. 10-11, 28.

What is the status and role of place attachment in contemporary American society? The authors argue that place attachment is critical for students to connect ideas and resources in the learning process, and for appropriate environmental policy and land management decisions. A sense of place is difficult to develop within a transient population—and especially in higher education settings—maintain the authors. An exploration of college course offerings that integrate “a sense of place” into the curriculum, and the role of community in pedagogy.

Moras, Peter S., 1999. *Characteristics of Environmental Restoration Service-Learning Projects in Selected, California Watersheds, and the Perceived Gains by Participating At-Risk. High School Students and their Teachers*, A dissertation to the School of Organizational Management, La Verne University, La Verne, CA.

The research targets “at-risk” youth and it is extremely well designed and executed. The appendices and references sections provide a rich background for the topic area.

National Service-Learning Cooperative, 1998. *Essential Elements of Service-Learning For Effective Practice, Organizational Support*, Inaugural Edition.

In essence, a rubric for effective practices in service-learning and developing organizational capacity to support implementation. Several examples of essential elements showcased science and environment-based programs. Lists partnering organizations. Useful resource for developing rubrics.

North American Association for Environmental Education, 1999. *Excellence in Environmental Education—Guidelines for Learning (K-12) Executive Summary & Self*

Assessment Tool, Rock Spring, GA

This recent publication is organized into four strands and how they progress, or spiral through the grade levels, offering benchmarks for assessment. A self assessment tool is included. The specific grades for application of benchmarks are: fourth, eighth and twelfth grades. Some areas included in the assessment are: "personal and civic responsibility"; and, "decision-making and citizenship skills".

Perry, James L. and Ann Marie Thomson, 1997. *Building Communities Through AmeriCorps*, Indiana University, School of Public and Environmental Affairs, Bloomington, Indiana.

An in-depth research project on the impacts on AmeriCorps on building community/organizational capacity. The research examined five communities, across the state of Michigan and concluded that no one strategy for building community through AmeriCorps could be identified. Further, in many cases the long-term goals for increasing community capacity have not been met.

Perry, James L. and Ann Marie Thomson, 1998. "Can AmeriCorps Build Communities?", *Nonprofit and Voluntary Sector Quarterly*, 24 (4), Newbury Park, CA, Sage Publications, pp. 399-420

The research looks at the concept of strengthening the whole to strengthen the parts of community organizations, and suggests that national service rethink their community building strategies to focus on organizational cooperation.

Pickeral, Terry and Karen Peters, eds., 1998. *Assessing Internal and External Outcomes of Service-Learning Collaborations*, Mesa, AZ, Campus Compact National Center for Community Colleges.

One of the few documents that addresses the community impact of service-learning. Some of the questions include, "...what works—and what can or should be changed?" It explores benefits to the organization and what community partners have to gain. Although the focus is on higher education, there are many applications to K-12 partnerships.

Rolzinski, Catherine A., 1990. *The Adventure of Adolescence: Middle School Students and Community Service*, Youth Service America, Washington, DC

Besides looking at the challenges and opportunities for middle school youth engaged in community service, the author profiles interesting, successful programs. One corps-based program focuses on environment and urban neighborhoods. Eight lessons are summarized from the case studies, and recommendations, strategies, and best practices are suggested. "At-risk" student population and diversity issues are included in the case studies and discussions, the research suggests that service learning is an effective strategy for all middle school-aged youth.

Saltz, Charlene, "The Road to Integration: Voices from the Field Share Their Community Service Learning Experiences With An Environmental Focus". An Antioch New England graduate research project.

The paper describes research conducted with teachers, administrators, and an environmental education resource specialist. The author makes a strong case for raising the status of teachers, giving them more time for planning, and suggests how to integrate community service-learning with an environmental focus, into the core curriculum.

Service Learning 2000 Center, 1998. "Seven Elements of High Quality Service Learning" , San Mateo, CA.

A one-page document, developed by Center staff, identifies seven elements of high quality service-learning as: 1) Integrated learning; 2) High quality service; 3) Collaboration; 4) Student voice; 5) Civic responsibility; 6) Reflection; and, 7) Evaluation. This is a good starting point for rubric development.

Shumer, Robert D., and Robin C. Vue-Benson, 1994. "Topic Bibliography on Service with Math and Science Education", Saint Paul, MN, National Service-Learning Clearinghouse.

A database of program references—mostly older resources—before the "boom" of service-learning launched by National Service and Community Trust Act and AmeriCorps.

Shumer, Robert D. and Robin C. Vue-Benson, 1994. "Topic Bibliography on Sources Related to Service and the Environment", Saint Paul, MN, National Service-Learning Clearinghouse.

A short bibliography of projects and resources, including curricula. None of the resources listed in this bibliography include research on environmental service-learning

Sigmon, Robert L., 1998. *Building Sustainable Partnerships: Linking Communities and Educational Institutions*, Raleigh, NC, National Society for Experiential Education.

Based on the practices and experiences of three case studies this work goes deeper into the challenges of developing effective partnerships between communities and educational institutions. The research looks at what it takes to create sustainable partnerships, and equitable, "reciprocal" relationships. This study focused on three themes: (1) Language for developing sustainable partnerships (S-L and community development); (2) Identifying concerns and capacities of each voice in a partnership; and (3) Strategies for creating lasting partnerships.

Simmons, Deborah, 1995. *Papers on the Development of Environmental Educa-*

tion Standards, Rock Spring, GA, North American Association for Environmental Education.

This publication develops a framework for creating EE standards. It examines subjects such as establishing standards for environmental educators to the question, "...what constitutes environmental literacy?" Some focus on cultural issues. The publication draws from many different "experts" in the EE field.

Strand, Kirsten, 1997. "Institutionalizing Service-Learning: How SEAs Can Support LEAs", NSEE Quarterly, National Society for Experiential Education, pp. 6-7, 26-27.

A close look at the history and rationale of required community service in Maryland's public schools. Lack of guidance and readiness from SEAs (state) to support LEAs (local) was identified as a barrier to building local capacity and service-learning expertise.

Students Actively Volunteering for You, 1998. "Eye on the Environment: A Curriculum for Planning Your Environmental Service", San Diego, CA, United Way of San Diego County

A four-page pamphlet that describes the P.A.R.C. model for service-learning. It includes preparation, action, reflection and celebration. The back page lists resources including Internet web sites.

Urban Places Project, 2000. *The YouthPower Guide: How to Make Your Community Better*, Amherst, MA, University of Massachusetts Extension.

This guide is geared for youth empowerment and community project development. Not only is it well designed, it helps to frame youth leadership in a non-threatening way for adults, while being user-friendly for youth. A refreshing, jargon-free approach to youth leadership and service.

Wade, Rahima, ed., 1997. *Community Service-Learning: A Guide to Including Service in the Public School Curriculum*. Albany, NY, State University of New York Press

A collection of essays building a case for the potential of service-learning to reinvigorate civic education. Wade and collected authors, give examples of environmental service learning programs. The environment is cited as a popular theme for beginning service learning practitioners. The book also looks at the critical issue of pre-service teacher education.

Wade, Rahima C. and Wendy M. Eland, 1995. "Connections, Rewards, and Challenges", National Society for Experiential Education" (NSEE) Quarterly, pp. 4-5, 26-27.

An article examining teachers' responses to service learning and curricular change. The article reviews the literature and summarizes research conducted by the authors, from data gathered from 84 midwestern teachers. Four recommendations were offered to address teacher support for service learning: (1) Assist teachers with identifying connections to social responsibility and academic learning; (2) Emphasize the importance of preparation; (3) Support teachers' planning of service learning projects; and, (4) Provide ongoing assistance.

Wade, Rahima C., 1994. "A Century of Service-Learning: Can We Get There From Here?" NSEE Quarterly. pp. 6-7, 26.

This article looks at three barriers to integrating service-learning into the school curriculum: (1) Service separate from learning; (2) "Do-gooding" as a mind set; and, 3) Superficial service. Wade builds a case for service-learning over community service, pre-service teacher training, as well as, other support strategies.

United States Environmental Protection Agency, 1999. *Service-Learning: Education Beyond the Classroom*, Washington, DC, EPA Office of Solid Waste and Emergency Response.

This booklet, which you can download from EPA's web site: www.epa.gov/osw, has a solid-waste education focus. Features of this short publication include: twenty half-page profiles of sample projects, K through 12; and, an appendices with some resources for organizations and materials, such as, Boys and Girls Clubs of America.